

UNIVERSITY OF
ILLINOIS LIBRARY
AT URBANA-CHAMPAIGN
BOOKSTACKS

NOTICE: Return or renew all Library Materiels! The **Minimum Fee** for each Lost Book is \$50.00.

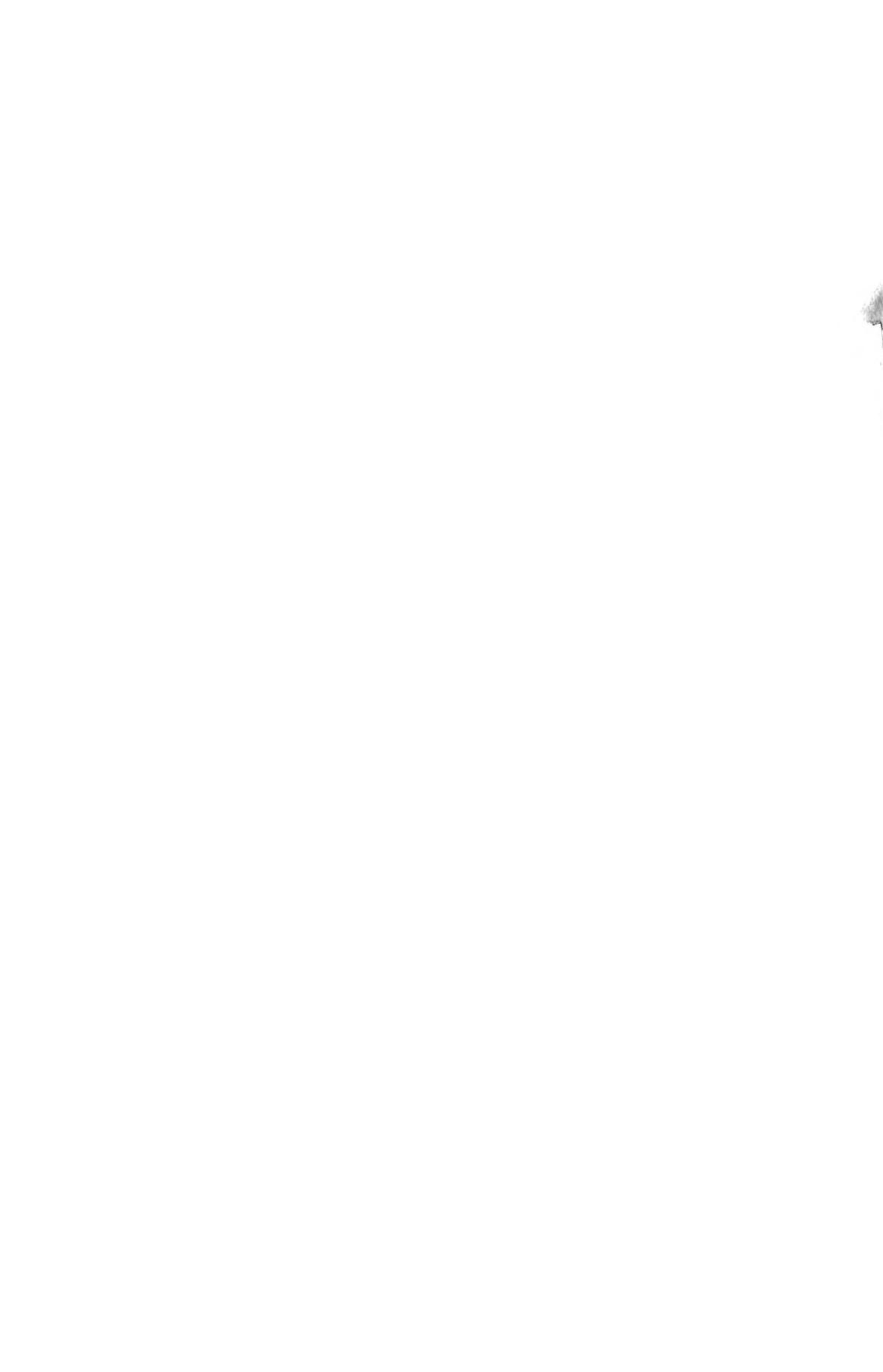
The person charging this material is responsible for its return to the library from which it was withdrawn on or before the **Latest Date** stamped below.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.
To renew call Telephone Center, 333-8400

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

DUE: _____		
JAN 15 1992		
3/11/93		
MAR 31 1993		
JUN 12 1993		

L161—O-1096



FIELDIANA

Anthropology

NEW SERIES, NO. 13

Indian Trade Ornaments in the Collections of Field Museum of Natural History

James W. VanStone

October 31, 1989
Publication 1404

PUBLISHED BY FIELD MUSEUM OF NATURAL HISTORY

Information for Contributors to *Fieldiana*

General: *Fieldiana* is primarily a journal for Field Museum staff members and research associates, although manuscripts from nonaffiliated authors may be considered as space permits. The journal carries a page charge of \$65 per printed page or fraction thereof. Contributions from staff, research associates, and invited authors will be considered for publication regardless of ability to pay page charges, but the full charge is mandatory for nonaffiliated writers of unsubmitted manuscripts. Payment of at least 50% of page charges qualifies a paper for expedited processing, which reduces the publication time.

Manuscripts should be submitted to Scientific Editor, *Fieldiana*, Field Museum of Natural History, Chicago, Illinois 60637. All manuscripts should be submitted to the Scientific Editor. Three complete copies of the text (including title page and abstract) and of the illustrations should be submitted (one original copy plus two review copies which may be machine copies). No manuscripts will be considered for publication or submitted to reviewers before all materials are complete and in the hands of the Scientific Editor.

Text: Manuscripts must be typewritten double-spaced on standard weight 8½ by 11-inch paper with wide margins on all four sides. For papers longer than 100 manuscript pages, authors are requested to submit a "Table of Contents," a "List of Illustrations," and a "List of Tables." In most cases, the text should be preceded by an "Abstract" and should conclude with "Acknowledgments" (if any) and "Literature Cited." All measurements should be in the metric system. The format and style of headings should follow those of recent issues of *Fieldiana*. For more detailed style information, see *The Chicago Manual of Style* (13th ed.), published by The University of Chicago Press, and also recent issues of *Fieldiana*.

In "Literature Cited," authors are encouraged to give journal and book titles in full. Where abbreviations are desirable (e.g., in citation of synonymies), authors consistently should follow *Botanico-Periodicum-Huntianum* and *Ecological Literature* by F. A. Stafleu & R. S. Cowan (1976 *et seq.*) (botanical papers) or *Serial Sources for Botany Data Banks* (1983) published by the BioSciences Information Service.

References should be typed in the following form:

- CROAT, T. B.: 1978. Flora of Barro Colorado Island. Stanford University Press, Stanford, Calif., 943 pp.
CREECH, P. L., J. R. LLOYD, and J. D. PESSINGTON: 1963. A comparison of montane and lowland rain forest in Ecuador. I. The forest structure, physiognomy, and floristics. Journal of Ecology, 51: 567-601.
ESSERSON, E. E. M.: 1979. Vage among the Siona: Cultural patterns in visions, pp. 63-80. In BROWMAN, D. L., and R. A. SCHWARZ, eds. Spirits, Shamans, and Stars. Mouton Publishers, The Hague, Netherlands.
MURRA, J.: 1946. The historic tribes of Ecuador, pp. 785-821. In STEWARD, J. H., ed., Handbook of South American Indians, Vol. 2. The Andean Civilizations. Bulletin 143, Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.
STRONZ, R. G.: 1981. Ferns and fern allies of Guatemala. Part II. Polypodiaceae. *Fieldiana Botany*, n.s., 6: 1-522.

Illustrations: Illustrations are referred to in the text as "figures" (not as "plates"). Figures must be accompanied by some indication of scale, normally a reference bar. Statements in figure captions alone, such as "× 0.8," are not acceptable. Captions should be typed double-spaced and consecutively. See recent issues of *Fieldiana* for details of style.

Figures as submitted should, whenever practicable, be 8½ by 11 inches (22 × 28 cm) and may not exceed 11½ by 16½ inches (30 × 42 cm). Illustrations should be mounted on boards in the arrangement you wish to obtain in the printed work. This original set should be suitable for transmission to the printer as follows. Pen and ink drawings may be originals (preferred) or photostats; shaded drawings should be originals, but within the size limitation, and photostats should be high-quality, glossy, black and white prints. All illustrations should be marked on the reverse with author's name, figure number(s), and "top." Original illustrations will be returned to the author upon publication unless otherwise specified. Authors who wish to publish figures that require costly special paper or color reproduction must make prior arrangements with the Scientific Editor.

Page Proofs: *Fieldiana* employs a two-step correction system. Each author will normally receive a copy of the edited manuscript on which deletions, additions, and changes can be made and queries answered. Only one set of page proofs will be sent. All desired corrections of type must be made on the single set of page proofs. Changes in page proofs (as opposed to corrections) are very expensive. Author-generated changes in page proofs can only be made if the author agrees in advance to pay for them.

FIELDIANA

Anthropology

NEW SERIES, NO. 13

Indian Trade Ornaments in the Collections of Field Museum of Natural History

James W. VanStone

*Curator, North American Archaeology and Ethnology
Department of Anthropology
Field Museum of Natural History
Chicago, Illinois 60605-2496*

**Accepted May 16, 1989
Published October 31, 1989
Publication 1404**

PUBLISHED BY FIELD MUSEUM OF NATURAL HISTORY

© 1989 Field Museum of Natural History

ISSN 0071-4739

PRINTED IN THE UNITED STATES OF AMERICA

Table of Contents

ABSTRACT	1
I. INTRODUCTION	1
II. PENDANTS	
Crosses	3
Effigies	3
Miscellaneous	4
III. BROOCHES	5
IV. GORGETS	6
V. ARM- AND WRISTBANDS	7
VI. EAR ORNAMENTS	7
VII. MISCELLANEOUS	8
VIII. IDENTIFYING MARKS	8
Effigies	10
Brooches	10
Ear Ornament	11
Intentionally Obliterated Touchmarks	11
IX. CONCLUSIONS	12
ACKNOWLEDGMENTS	13
LITERATURE CITED	13
APPENDIX	15

List of Illustrations

1. Pendants	19
2. Engraved design on a breast ornament	20
3. Disk brooches	21
4. Disk, ring, square, and heart brooches	22
5. Round gorgets; star, heart, Masonic, and animal effigy brooches	23
6. Engraved design on a round gorget	24
7. Engraved design on a round gorget	24
8. Crescent-shaped gorgets	25
9. Armbands and crescent-shaped gorgets	26
10. Engraved design on a crescent-shaped gorget	27
11. Engraved design on a crescent-shaped gorget	27
12. Armbands	28
13. Engraved design on an armband	29
14. Engraved design on an armband	29
15. Armbands	30
16. Engraved design on an armband	31
17. Engraved design on an armband	31
18. Wristbands	32
19. Earrings, ear wheels, earbobs, and miscellaneous ornaments	33
20. Waistband and head/hatbands	34
21–32. Unidentified touchmarks and marks of uncertain attribution	35–40

Indian Trade Ornaments in the Collections of Field Museum of Natural History

Abstract

Throughout its history, Field Museum of Natural History's Department of Anthropology has acquired a sizable collection of American Indian trade ornaments. This collection, which includes a variety of pendants, brooches, gorgets, and other objects of personal adornment, is described and illustrated in this study. Numerous items in the collection are marked with the individual marks of craftsmen who produced ornaments for the Indian trade. Though some marks cannot be identified with certainty, the majority of marked pieces represent the work of Canadian craftsmen and were traded to the Indians by traders based in Montreal. The collection as a whole illustrates the importance of this trade and the variety of ornaments traded to Indians in the Great Lakes area in the latter 18th and early 19th centuries.

I. Introduction

Over the years since it was founded in 1894 to house collections from the World's Columbian Exposition of 1893, Field Museum of Natural History has acquired several collections of American Indian trade ornaments. These collections vary considerably in size and completeness of documentation, but are impressive primarily because of the variety of styles and forms represented. Also, a sizable number of individual pieces bear maker's touchmarks which can be identified with known craftsmen who produced ornaments for the Indian trade.

In December 1900 the museum purchased from Walker C. Wyman a large collection of archaeo-

logical and ethnographic material from the Great Lakes region which includes 27 trade ornaments (accession 727), all of which were apparently collected or purchased by Mr. Wyman. Ten of these pieces are identified in the museum's accession records as having come from "Cross Village, Michigan" and the remainder lack proveniences. This community is at the northern end of an area along the northeast shore of Lake Michigan originally known as L'Arbre Croche, which extended as far south as Petoskey in Emmet County. According to Blackbird (1977, p. 10), there was a continuous village of some 15–16 miles long in this area. It was occupied by Ottawa Indians who moved there in 1742 from Michilimackinac (Tanner, 1987, p. 62).

The Indians at L'Arbre Croche, like other Ottawa in villages along the shores of lakes, relied heavily on fishing with nets for subsistence. Individual or group hunting of deer, bear, beaver, and other mammals as well as a variety of waterfowl was also important, particularly in winter when the Indians moved to their more southerly hunting grounds. Women planted corn, beans, and squash near the summer villages, and the gathering of wild food products was widely practiced (Feest & Feest, 1978, p. 774). Archaeological materials relating to the early historic period in the L'Arbre Croche area have been described briefly by Alberts (1953, pp. 89–95) and Quimby (1966, pp. 150–151).

In a 1943 exchange with H. E. Brouwnect, the museum obtained 70 trade ornaments, 61 of which were excavated by unknown individuals from a site on Round Island, Michigan, in the Straits of Mackinac adjacent to Mackinac Island (accession 2328). Unfortunately, no other information was received with this collection. In the 18th and early

19th centuries a nearby fort was the center of the fur trade in the western Great Lakes. This fort, established by the French about 1715 at Michilimackinac on the tip of the lower peninsula of Michigan, was moved by the British to nearby Mackinac Island in 1781. It marked the boundary between the Ottawa territory on the west and Ojibwa (Chippewa) country to the east (Tanner, 1987, pp. 62–63). The Brouwnect collection also contains seven pieces identified in the catalog of the Department of Anthropology as from the "Ottawa or Chippewa." In addition, two pieces are from Lee County, Mississippi. This area, with the Tupelo region as its focal point, was the primary center for the entire Chickasaw Nation from the earliest contact period until their removal west in the 1830s. It was also an important trade center for British and, later, American traders from the southeastern coast and the Ohio and Mississippi rivers (Gibson, 1971, pp. 33, 36, 38, 41, 43–44, 68, 86).

In July 1954 Arthur Shulene sold the museum a collection of historic archaeological material, including 36 trade ornaments, excavated in 1928 from Indian graves along the Des Plaines River near Channahon in Will County, Illinois (accession 2520). A number of ornaments in this and the two previously described collections have been illustrated by Quimby (1958, fig. 1, p. 319).

In 1977–1978 the Department of Anthropology received sizable collections of trade ornaments as gifts from Mr. and Mrs. Theodore Van Zelst (accession 3348) and Mr. and Mrs. John M. Mitchell (accession 3368). These collections, assembled by the donors over a period of 30 years, lack proveniences. A total of 47 ornaments from these accessions are included in this study.

Smaller collections of trade ornaments described here include two pieces from the Sac and Fox of Tama, Iowa, included in a collection purchased in 1905 (accession 947); six pieces from the Potawatomi of Wisconsin obtained along with other ethnographic material on a field trip in 1925 (accession 1618); two pieces recovered from a grave in Prairie du Chien, Wisconsin, included in a collection obtained in 1893 (accession 97); and five pieces from the Seminole of Florida purchased as part of a larger ethnographic assemblage in 1906 (accession 996). No other information concerning these collections occurs in the accession files.

The literature on various aspects of Indian trade ornaments is not extensive and there are relatively few sources in which a variety of forms are well illustrated. The purpose of this study, therefore, is

simply to describe and illustrate a varied collection of ornaments, emphasizing variety, and to focus on the makers of such ornaments and the marks used to identify their work.

The term "trade silver" is sometimes applied to any item that possesses a high polish and was used by North American Indians for decoration and trade. Such ornaments, or trinkets, were made of brass, copper, pewter, lead, and German or nickel silver, as well as laminated sheet silver. Objects of all these materials are represented in Field Museum's collection, but the majority are of sheet silver. Exceptions are indicated in the individual descriptions.

Ornaments of sheet silver were made specifically for use in the fur trade by silversmiths in Canada, England, and the United States, and are considered to be an excellent criterion for dating archaeological sites in the western Great Lakes and elsewhere in eastern Northern America between ca. 1760 and 1820. In addition to their importance as chronological indicators, these silver ornaments, although of Euramerican manufacture, have always been regarded by anthropologists as an integral part of North American Indian culture, reflecting many aspects of Indian-white relations in the latter 18th and early 19th centuries (Quimby, 1966, pp. 91, 100).

Silver ornaments were initially introduced to North American Indians in the form of diplomatic gifts and later became a significant item in commercial trade. The earliest silver ornaments were medals, sometimes also made of brass, copper, or pewter, which were given to Indian leaders as a badge of honor and to secure friendly relations with the various tribes. As hostilities between European powers in North America increased, Indian allies became extremely important, particularly to the French and British, and the amount and variety of silver ornaments presented during alliance ceremonies proliferated. In addition to diplomatic alliances, Europeans also desired the impressive profits that could be derived from trade for furs. As the Indians wanted, among other trade goods, silver for their furs and services, traders became increasingly aware of the necessity of including items such as brooches, earrings, arm-bands, crosses, gorgets, and finger rings in their trading inventories. With this accelerated demand, by the mid-18th century silver ornaments were being produced in North America specifically for the Indian trade (Fredrickson & Gibb, 1980, pp. 27–28, 33).

In the 18th century, coins were the primary

source of silver in North America. They were melted down, alloyed with a small amount of copper to give durability, and then pressed or pounded into thin sheets. Very little metal was thus required for individual items, and large-scale production was relatively inexpensive. The sheets were cut to form gorgets, brooches, armbands, and other forms, and then decorated with engraved or pierced designs (Fredrickson & Gibb, 1980, p. 41).

German or nickel silver, an alloy of copper, zinc, and nickel metallurgically defined as containing no silver, may have been developed in China as early as the 8th century A.D. It was being manufactured commercially in Germany in the early 19th century and was introduced into the North American trade shortly after 1830. By the late 1830s and early 1840s, at least in part because of the rising cost of pure silver in the early 19th century, articles of nickel silver were in use in the Great Lakes Indian trade. The high cost of pure silver rendered continued manufacture and trade in ornaments of this material commercially impractical, and they were gradually eliminated from the Indian trade between 1830 and 1850. The commercial manufacture of Indian trade ornaments of nickel silver apparently continued until as late as 1845 (Hanson, 1979; Demeter, 1980, pp. 108–109, 116–117).

Field Museum's collection of trade ornaments is sufficiently varied so that the items can be described under the following headings: pendants (primarily crosses and effigies), brooches, gorgets, arm- and wristbands, ear ornaments, and miscellaneous forms. The descriptions which follow, although hopefully sufficient to make clear the special characteristics of each form, are brief, and the reader is urged to pay particular attention to the photographs. Relevant comparisons with similar specimens in published collections are made whenever possible.

II. Pendants

Crosses

Although copper and brass crosses given to Christian converts by early Jesuit missionaries obviously were church symbols, it seems clear that the silver crosses distributed as trade items by fur traders and government agents at a later date were without religious significance (Quimby, 1937, pp. 15–16). They were worn by men and women sim-

ply as chest and ear ornaments (Quimby, 1966, p. 95; Fredrickson & Gibb, 1980, p. 60).

Two types of crosses in Field Museum's collection were common trade items: the Latin or single-barred cross and the Florentine or double-barred form. There is a single example of the former in the collection, the arms of which have been restored with nickel silver, possibly by a museum restorer. The head and foot of the shank as well as the ends of the crossbar are foliated. Both sides of the shank are ornamented with identical incised designs, some of which are rocker-engraved in a zigzag pattern. There is a suspension ring at the proximal end. The restored arms are undecorated. This cross, from Round Island, Michigan, is stamped with the mark of the Montreal silversmith Robert Cruickshank and is illustrated by Quimby (1966, fig. 20, p. 94). Latin crosses are illustrated by a number of authors, including Fredrickson and Gibb (1980, pp. 61–62, 120–123, 141).

On both of the Florentine or double-barred crosses in the collection the head and foot of the shank as well as the ends of the crossbars are foliated. Each has a suspension hole with silver wire rings and the lower crossbar slightly longer than the upper. The larger of these crosses, illustrated by Quimby (1966, fig. 20, p. 94), is from Round Island and is ornamented on both sides with incised wavy lines and triangles, from the apex of which are floral-like designs (fig. 1a). The smaller is decorated with rocker-engraved zigzag lines and is stamped with the mark of Robert Cruickshank; it is from Will County, Illinois (fig. 1b). Florentine, or "Lorraine," crosses are illustrated by Fredrickson and Gibb (1980, pp. 61, 97, 99, 102, 121–122).

The collection also contains a Maltese cross pendant from Round Island. It has a silver wire suspension ring and is ornamented on both sides around the edges with rocker-engraved zigzag lines (fig. 1c). This is an unusual form rarely seen in ornaments made for the Indian trade by Euro-American silversmiths. It is more often encountered in those cut by Indians from larger silver ornaments. The high quality of the rocker engraving around the entire perimeter of this cross indicates the work of a professional silversmith.

Effigies

Animal effigy pendants are among the most problematic trade ornaments. Although the museum collection contains a variety of animal forms,

many authorities have doubted their authenticity because there has been little direct evidence of their having been used in trade. The ten effigy pendants included in this study were examined by two experienced students of Indian trade ornaments with particular attention to materials, forms, manufacture, patina, and wear patterns. These pendants are undoubtedly authentic.

Field Museum's collection contains six beaver effigy pendants, two solid cast and four hollow; all have suspension holes. Two virtually identical solid beavers of bronze or brass are small and crude, the shape of the animal being poorly defined, with incised cross-hatching on the tail and the eyes and claws indicated (fig. 1g). The four hollow beaver effigies, three of silver, are larger and more carefully made. Two silver examples, both with applied bottoms, were recovered in an archaeological context on Round Island. The bodily form is clearly indicated as are the eyes and claws. On one, stamped with the mark of Robert Cruickshank, there is cross-hatching on the tail (fig. 1d), while on the other the texture of the tail is indicated by short raised bumps produced by hammering the tail portion over a similarly ornamented form before the bottom was applied. This beaver has the touchmark of Jonas Schindler on the bottom; it has been partially obliterated intentionally (fig. 1i). The third touchmarked silver beaver, of unknown provenience, is hollow, broad, and flat, with no anatomical features indicated except rocker-engraved claws and eyes (fig. 1j). A brass or bronze beaver, almost identical in form to the previously described silver example, has two suspension holes and an applied bottom. The eyes are incised and the claws indicated by rocker-engraved zigzag lines (fig. 1k).

Few silver beaver effigies recovered in an archaeological context are described in the literature. One, bearing the mark of Robert Cruickshank, is in the Wisconsin State Historical Museum and was recovered from an Indian grave on the Brule River, Douglas County, Wisconsin (Brown, 1918, p. 96, pl. 3). Another excavated example, stamped with the mark of Narcisse Roy, is in the Grignon House collection, Kaukauna, Wisconsin (Mason, 1983, p. 242, fig. 4).

Many of the silver beavers in museum collections have the touchmark of Robert Cruickshank (Fredrickson & Gibb, 1980, p. 57). Quimby (1966, p. 95) has suggested that such effigy ornaments were probably first made at the request of Indians living in the northern half of the western Great Lakes region, since it was in this area that stone

beaver effigies of considerable antiquity were widespread.

Turtle effigies are represented in Field Museum's collection by two examples. A silver touch-marked effigy, lacking a suspension hole, is hollow and without anatomical details (fig. 1e). The other, of unknown provenience, is of cast lead or pewter, crude, and covered with incised ornamentation (fig. 1f). The suspension ring is on the flat reverse side. In the late 1890s a silver turtle effigy, now in the Davenport (Iowa) Public Museum, was recovered from a grave in Emmet County, Michigan (Alberts, 1953, p. 90).

A hollow copper fish effigy, of unknown provenience, has a separate applied back and is decorated with rocker-engraved zigzag lines indicating the mouth, gills, and dorsal fin; similar zigzag lines encircle the touchmark (fig. 1h).

A hollow copper bird effigy also has a separate applied back and a touchmark. It is hung on a rosary chain of spherical copper beads which were once silver plated (fig. 1n).

Miscellaneous

An unusual pendant or breast ornament from Round Island has been cut from an armband. It consists of two pieces joined by silver wire loops through holes at each end. On the larger piece, which shows along its entire lower edge part of the original ribbing of the armband, is the engraved figure of an Indian holding a bow (fig. 2). At the lower end are triangular dangles at each corner and in the center. The two side dangles now appear as notched arrowhead effigy forms, probably the result of the accidental tearing out of the suspension hole during use. Each time this occurred, a new perforation was made in another corner. A cross with expanded arms hangs from the center dangle. At the upper edge is a pair of suspension holes (fig. 1m). The six loops of silver wire required to construct this piece may have been taken from pendants and earbobs; this ornament is illustrated by Quimby (1966, p. 94). Similar but less elaborate "plaque and bangle" assemblages were recovered at the Fletcher site cemetery, Bay County, Michigan (Mainfort, 1979, p. 396, figs. 63-64).

Also cut from an armband are five rectangular pieces of silver from Round Island which may have been connected in a manner similar to the previously described ornament. The ribbing shows on one piece and there is rocker engraving on another.

A simple diamond-shaped pendant from Will County, Illinois, with a suspension hole retains a portion of the original design, an embossed eagle with outstretched wings grasping branches in its talons, over which is a line of six-pointed stars (fig. 1,l). It appears to have been cut from a U.S. Army gorget or possibly a special U.S. government treaty gorget or armband.

The miscellaneous ornaments described here were almost certainly cut by Indians from larger silver ornaments. The production of multiple items from a single large item was a common practice.

III. Brooches

Brooches are the most abundant ornament form in Field Museum's trade silver collection. There are 75 examples, all but three of sheet silver, and they include seven types.

Forty-three brooches, including two of nickel silver and one of pewter, are concave disks with central circular openings; only nine are of known provenience. The tongue for fastening to the garment is missing from 14 specimens. Twenty-two are decoratively perforated with a symmetrical arrangement of oval, triangular, diamond-shaped, heart-shaped, and semilunar perforations and are ornamented with rocker engraving. Of this number, nine have smooth edges (fig. 3a-f) and 13 have scalloped edges (figs. 3g-m, 4a-c).

Ten brooches, six with smooth and four with scalloped edges, have no ornamental perforations (fig. 4d-i, k, m-n). One of these, with the tongue hole torn out, may have had the edges trimmed down (fig. 4i). Another, with crude rocker-engraved designs, appears to be homemade from a larger brooch (fig. 4f). A pewter specimen is a commercial piece of unknown origin adapted as a brooch (fig. 4o).

Seven disk brooches from Round Island are small, convex on the underside, and were apparently recovered together (fig. 4p). A somewhat larger example is decorated with a rocker-engraved wavy, curved line (fig. 4x).

A disk brooch of nickel silver is flat and the surface is ornamented with a circular design made of small Y-shaped indentations (fig. 4t). A somewhat similar brooch is illustrated by Fredrickson and Gibb (1980, p. 97). Another is oval, lacks the perforation for a tongue, and is ornamented with wavy, spurred lines (fig. 4y). A single disk brooch is ornamented with rocker-engraved lines and the

center hole is in the shape of a six-pointed star (fig. 5,l).

Disk brooches have been widely described and illustrated (see Beauchamp, 1903, pls. 4-8; Quimby, 1937, fig. 2, front row, 1958, figs. 1, 5-6, 1966, fig. 20, lower left; Alberts, 1953, pls. 3e, 4e-f; Herrick, 1958, pl. 3, figs. 30-31; Fredrickson & Gibb, 1980, pp. 90, 96, 104-105, 109-110, 129-130, 149, 153).

Thirteen brooches have plain openings in the center which are unadorned except for the tongues; these are missing from two specimens. These plain, or ring, brooches exhibit considerable variation. Five are thin and flat (4j). Four of these were recovered together from the Will County site; the fifth is thin and ornamented with a rocker-engraved zigzag line (fig. 4w). One large ring brooch is convex on the underside (fig. 4j,l), and another, cast and lacking a cross pin, has a wide center hole with scalloped edges (fig. 4s). A group of three cast ring brooches from Round Island are beaded on the outer surface (fig. 4r), and another set of three, also cast, with the same provenience, have crenulated surfaces (fig. 4q). Round or ring brooches similar to those in Field Museum's collection are illustrated by Fredrickson and Gibb (1980, pp. 22, 96, 120, 132, 151).

Somewhat distinctive are three square brooches, one ornamented with a rocker-engraved zigzag line (fig. 4z), another plain with notched corners (fig. 4ee), and the third perforated and ornamented with a series of incised circle dots (fig. 4dd). Similar "council square" brooches are illustrated by Fredrickson and Gibb (1980, pp. 95, 128, 151).

A style of brooch closely associated with Iroquois tribes is formed of one or two intertwined hearts, sometimes ornamented with a crown (Alberts, 1953, p. 53; Harrington, 1908, p. 355). The heart-shaped brooch is believed to have come from Scotland, where it was a popular betrothal symbol. The form may have been introduced by British-trained silversmiths or requested by Indians after seeing it worn by Scotch traders (Parker, 1910, p. 353; Fredrickson & Gibb, 1980, p. 53).

Of the 11 heart brooches in Field Museum's collection, one is a simple unadorned heart, cast in two pieces, from Round Island (fig. 4u). A similar brooch is illustrated by Fredrickson and Gibb (1980, p. 123). Five are relatively plain with one to three perforations at the top and ornamented with rocker-engraved zigzag (fig. 4v, aa-cc, gg). Two are slightly more elaborate with projections at the top but only sparsely ornamented with rocker-engraved lines (fig. 4ff, hh). A single specimen

has an elaborate crown with a number of projections and perforations as well as punched dot ornamentation (fig. 5j). There are two double heart brooches (fig. 5i, k), one with incised circle-dot ornamentation along the top of the crown (fig. 5k). A number of these heart brooches resemble specimens illustrated by Converse (1900, pls. 65–66), Beauchamp (1903, pl. 14), and Fredrickson and Gibb (1980, pp. 53, 94, 124–125, 152).

There are three examples of the so-called “star brooch” (Quimby, 1966, p. 93; Fredrickson & Gibb, 1980, p. 52). Two are eight-pointed stars, one of which, from Will County, is concave on the reverse with the points of the stars ending in small ovals (fig. 5h). The second, which lacks a tongue, is Indian-made from a gorget or armband. Some of the original engraving is visible (fig. 5f). The third brooch is twelve-pointed with bosses at the ends of the points and many rectangular and semilunar perforations (fig. 5c). Star brooches are illustrated by Fredrickson and Gibb (1980, pp. 131, 152–153).

A small brooch is in the form of a stylized turtle effigy, the eyes represented by raised bosses, claws by notches in the side of the specimen, and the tail by a raised line (fig. 5m). No similar brooches were noted in a survey of the literature.

A characteristic form of trade silver brooch is in the Masonic style, consisting of variously combined compasses, squares, and distortions of other Masonic emblems. This style of brooch has been identified almost exclusively with Iroquois tribes and appears to have had no Masonic significance to most of the wearers. However, many British officers and traders in North America were members of the Order of Freemasons and a few Iroquois leaders in the late 18th and early 19th centuries are known to have been Masons (Beauchamp, 1903, p. 91; Alberts, 1953, pp. 56–58; Fredrickson & Gibb, 1980, p. 53). Field Museum’s collection contains only one Masonic brooch. It has three raised bosses, an attribute that is characteristic of the form, and an unusual shape (fig. 5g). An identical specimen is illustrated by Converse (1900, p. 236, pl. 62, no. 1), who considered the lower end to be in the shape of a tomahawk.

IV. Gorgets

Two types of gorgets, worn primarily on the chest, are recognized by students of Indian trade ornaments; both types are represented in Field Museum’s collection. There are four round gorgets that are concavo-convex in cross section, are or-

namented on the concave outer surface with incised designs, and have, or had, paired suspension holes that are separate pieces and form bosses on the outer surface. The first, from the Chickasaw, Lee County, Mississippi, is ribbed around the outer edge and decorated with an incised and rocker-engraved sunburst design in the center (fig. 6); one suspension ring and its boss are missing (fig. 5b). Two from Round Island are also ribbed around the outer edges. The suspension rings are missing from one of these and the incised design on this gorget is the figure of a running deer (fig. 5e); the other is ornamented with a floral design (fig. 5a). The fourth round gorget, from Will County, has high quality rocker engraving around the edge and the engraved figure of a running fox in the center (figs. 5d, 7). Round gorgets were derived from the medallion-like shell gorgets most prevalent among aboriginal southeastern Indians (Quimby, 1966, p. 93; Fredrickson & Gibb, 1980, pp. 32, 106, 134, 140, 142).

The collection contains 13 crescent-shaped gorgets which are also concavo-convex in cross section. Six, of diminishing size, have the same catalog number and are described in the Department of Anthropology catalog as a necklace from the Potawatomi of Wisconsin. They are made of tinned sheet iron and the edges are rolled around brass wire. All have a pair of suspension rings with bosses and incised designs in the center on the convex outer surface. Four have identical incised ornamented diamond designs, one an ornamented heart and one an animal, possibly a fox or dog (fig. 8e). It is likely that these gorgets are mid-19th century copies of earlier silver, copper, or brass ornaments.

A pair of identical large gorgets were collected among the Seminole. They are ribbed around the edges and have a pair of suspension holes (fig. 9f). These ornaments would appear to have been quickly and cheaply made. The lack of contour and rolled-over edges that would take time and labor suggest a late date, perhaps the mid-19th century.

Three gorgets from Will County are ribbed around the outer edges. One is decorated with an incised animal, possibly a raccoon (fig. 9e); another, which lacks its suspension rings and bosses, with a roulette-engraved sunburst showing human features (figs. 8b, 10); and a third with a rocker-engraved turtle (figs. 8a, 11). A single gorget from Lee County, Mississippi is plain with suspension holes and a scalloped lower edge. The intentional zigzag scratches on the front and back, almost invisible without magnification, were done by In-

dians (fig. 8c). The thirteenth gorget is of copper or brass with raised suspension holes in place of bosses. In the center in relief are the initials of the Hudson's Bay Company (fig. 8d).

According to Fredrickson and Gibb, who illustrated a number of crescent-shaped gorgets (1980, pp. 31, 59, 98–99, 106, 114, 116–118, 141, 144–146), most of these chest ornaments were an adaptation of the flat, elongated French military gorget rather than the more deeply crescentic British gorget.

V. Arm- and Wristbands

The collection contains three pairs of armbands, strips of sheet silver curved to fit the arm above the elbow, and six single bands. Two pairs are identified in the catalog as having been used by the Chippewa or Ottawa. The first pair is ribbed along the edges and ornamented with rocker-engraved straight and wavy lines. In the center of one band is the engraved figure of a beaver (figs. 12c, 13), and in the same position on the other a large, long-necked bird, possibly a crane, holds a snake in its beak (figs. 12d, 14). The second pair is two bands made out of one. This would enable the Indian owner to trade the other band of the pair. There is one original end and the others are trimmed and repunched. When worn, each band would show only on the front of the arm. Both are undecorated except for ribbing along the edges (fig. 9a–b). The third pair is of German silver and was acquired by the museum in 1905 on the Sac and Fox reservation at Tama, Iowa; it presumably dates from the mid- to late 19th century. The bands are ribbed along the edges and ornamented with stamped bosses filled with rocker engraving (fig. 15a).

Of the six single armbands, two from Round Island have been cut and trimmed from larger bands and repunched; they are undecorated (fig. 9c–d). The third band, from Cross Village, Michigan, is ribbed along the edges and has an engraved floral design, probably of Indian origin, in the center (figs. 12a, 16). A similar band, identified as Chippewa or Ottawa, is also ribbed along the edges and has the engraved figure of a large, long-necked bird, probably a crane, in the center (figs. 15b, 17). The fifth band has no catalog number. It is ribbed along the edges and is ornamented with rocker-engraved wavy lines and a heart with scalloped edges (fig. 12b). The sixth single band, very narrow

with pronounced ribs along each edge, is ornamented with a series of short, rocker-engraved zig-zag designs; there are no attachment holes (fig. 15c). Armbands with engraved designs are illustrated by Fredrickson and Gibb (1980, pp. 91, 98, 103, 138, 143–144).

Wristbands in Field Museum's collection are narrower and shorter than armbands. There are four pairs and 12 bands which cannot be grouped into pairs. All have a single attachment hole at each end. One pair from the Seminole appear to have been cut from larger bands and are undecorated (fig. 18a). Two pairs from Round Island are ribbed on the outer surface and have one scalloped edge (fig. 18e). The fourth pair, recovered from a grave in Prairie du Chien, Wisconsin, and acquired by the museum in 1893, is also ribbed on the outer surface but otherwise undecorated.

Eight single wristbands from Cross Village are of varying widths and, with one exception, are ribbed on the outer surface (fig. 18b–d, f–g). One of these has a smooth outer surface with trimmed ends and repunched attachment holes; it may have been a child's wristband (fig. 18g). There are four bands from Will County that vary in width and thus presumably are not pairs; they are extensively ribbed on the outer surface (fig. 18i). Ribbed wristbands similar to those described here are illustrated by Fredrickson and Gibb (1980, pp. 138, 150, 152).

VI. Ear Ornaments

Three earrings from Will County are cast in the form of Florentine crosses (fig. 19n). Another, of unknown provenience, consists of a Latin cross with foliated ends attached to a large ring and ball. A rocker-engraved line runs around the edges of the cross on one side (fig. 19b). Earrings in the form of crosses are illustrated by VanStone (1970, p. 23) and Fredrickson and Gibb (1980, pp. 61, 135).

Three pairs of ear ornaments have homemade dangles mounted on a ring and ball. On two of these, from Round Island, the dangles are in the form of cut triangles (fig. 19o, r). On the other pair, from the Chippewa or Ottawa, one dangle is diamond-shaped and the other is in the form of a Maltese cross (fig. 19e).

The collection contains 22 ball-and-cone earring bobs, four of which are probably pairs. Of the total, 10 are from Round Island and the remainder from

Will County. Typical examples are illustrated (fig. 19,l-m). One has a brass button dangle rather than a cone (fig. 19q), and four are of the very small type sometimes worn individually as nose ornaments (fig. 19s-t). Ball-and-cone earbobs are illustrated by Brown (1918, pl. 3), Alberts (1953, pls. 7c-d, 8e), VanStone (1970, p. 23), Fredrickson and Gibb (1980, pp. 135, 136, 148), Hanson (1983, p. 3), and Mason (1983, fig. 10).

Three round, flat disks with perforations that create stylized floral patterns are identified as ear wheels. One is from Round Island (fig. 19a), another from Will County (fig. 19c), and the third of unknown provenience (fig. 19d). Ear wheels were designed to hang from the ear on a wire hook; they are illustrated by Alberts (1953, pl. 21), Fredrickson and Gibb (1980, pp. 97, 136), and Hanson (1983, p. 3).

An unusual pair of ear ornaments consists of two sizes of fluted, ovoid cylinders with tapered ends, suspended from ball-and-chain links, which have been elongated by adding the standard ball and cone. At the upper end of one is a solid attachment piece with a hook for the ear (fig. 19f). It is possible that both of these were hung from one ear.

terminates in a checker pattern at the ends. At regular intervals in the center, the band is stamped with inverted T-shaped perforations (fig. 20b). The second headband/hatband is round with the diameter shorter at the top than at the bottom. There are oval perforations at either side near the center. The surface is rocker-engraved around the edges with wavy and straight lines, and with a cross at the center of one side (fig. 20c). Headbands were rarer than other styles of trade silver and often worn as decoration on European hats (Fredrickson & Gibb, 1980, pp. 30, 57, 89, 107, 148, 151).

A simple waistband from the Seminole is ornamented with a row of raised bosses along one edge. There are punched holes at either end for tying around the waist (fig. 20a). This form is unknown in the Great Lakes region. Like the other Seminole silver pieces described in this study, this one appears to date from the mid- to late 19th century. To minimize labor costs, it lacks many of the features of contour and decoration characteristic of earlier trade silver ornaments.

An oval nose ring is a concave, crescent-shaped piece of silver with a gap for the nasal septum. A small cone-shaped dangle hangs in the center (fig. 19k).

A silver tube from Round Island has a circular perforation at one end and may be a hair pipe (fig. 19p). Like this tube, five oblong beads, also from Round Island, have been rolled from flat, rectangular pieces of silver. Both the tube and the beads were made by Indians.

A narrow strip of sheet silver cut by Indians in the stylized shape of a snake and with suspension holes at either end may have been part of a necklace. There are faint, incised cross-hatchings on the outer surface (fig. 19i). It is similar to Late Woodland copper snake effigies from several Upper Great Lakes sites.

An unidentified oval salvage piece from Round Island, possibly incomplete, is ornamented with homemade rocker engraving and has perforations for sewing to a garment (fig. 19j).

VII. Miscellaneous

The collection contains two finger rings of the so-called Jesuit type, with decorations inspired by religious subjects. Both are made of brass and their provenience is unknown. The oval bezel of one is decorated with the Ave Maria motif, consisting of incised approximations of the letters "A" and "M" placed between parallel, horizontal lines (Cleland, 1972, p. 205; Wood, 1974, p. 87, fig. 3b). Above this ornamentation is a small incised crown. The band is plain with a flat inner and convex outer surface (fig. 19h). In western New York State, most Jesuit rings with the Ave Maria motif have been recovered from archaeological sites dating between 1645 and 1700 (Wood, 1974, table 1, p. 100). The second Jesuit ring has a rectangular bezel ornamented with an incised abstract motif (Wood, 1974, p. 94). Its band is double-ridged on one side at its juncture with the bezel and single-ridged on the other in the same location (fig. 19g).

Two rectangular silver bands are identified as headbands or hatbands. The most elaborate, from Cross Village, has a scalloped upper edge and along the lower edge a rocker-engraved wavy line that

VIII. Identifying Marks

Of the 196 pieces described in this study, 76 are marked either with the individual mark of a smith who produced ornaments for the Indian trade or pseudo hallmarks of various designs, or both. Of the marked specimens, 44 have maker's touch-

marks that can be identified with some degree of certainty, and on the remainder the marks cannot be identified. Of the total number of marks described here, only those not shown in Langdon (1966, 1969), Quimby (1958, fig. 2; 1966, pp. 98–99), and Fredrickson and Gibb (1980, p. 39) are illustrated.

The Montreal silversmith Robert Cruickshank made and sold silver ornaments to the North West Company. His mark consists of the script capital letters "RC" in a curvilinear cartouche (Quimby, 1966, p. 98–99); it occurs on a Latin cross, two Florentine crosses (fig. 1a–b), a beaver effigy (fig. 1d), three disk brooches (fig. 4e, g, k), two round gorgets (fig. 5b, e), an armband (fig. 12b), and two wristbands (fig. 18g–h). On the Florentine cross from Round Island, the mark has been partially obliterated intentionally, and on the armband and wristbands it is accompanied by the word "Montreal" in a rectangular cartouche. Records indicate that Cruickshank's period of production lasted from 1779 to 1806 or perhaps 1809 (Traquair, 1938; Quimby, 1937, 1966, p. 198; Langdon, 1966, p. 62).

Another well-known Montreal silversmith was Charles Arnoldi, whose work may be represented in the collection by a disk brooch (fig. 4f) and a double heart-shaped brooch (fig. 5k). The touchmark, consisting of the letters "CA" in script capitals separated by a pellet (Quimby, 1966, pp. 98–99), was previously attributed to Charles Arnoldi, but recent research suggests that it may, in fact, represent a Cruickshank-Michael Arnoldi partnership (Fredrickson & Gibb, 1980, p. 41). Documentary evidence dates Charles Arnoldi's work from at least 1784 to 1810 (Alberts, 1953, pp. 26–27; Langdon, 1966, p. 42; Quimby, 1966, p. 198). Barbeau (1942, p. 13) illustrates a fine Florentine cross by Arnaldi or Cruickshank-Arnoldi, which is now in the American Museum of Natural History.

A beaver effigy (fig. 1i), a star brooch (fig. 5h), three armbands (figs. 12d, 15b), and four wristbands (fig. 18e) have touchmarks consisting of the Roman letters "IS" in an oval cartouche (Quimby, 1966, pp. 98–99). The touchmark has been intentionally obliterated on all three armbands. This is the mark of the Quebec silversmith Joseph Schindler and, after his death, his wife. Schindler was living in Quebec City as a silversmith at least as early as 1767 and worked there until his death in 1786. The Widow Schindler, as she was called, moved to Montreal and provided Indian trade silver from 1797 until she died in 1802. According

to Langdon (1966, pp. 125–126), it is not clear from the records whether she actually made silver or simply acted as an agent. Traquair (1938, p. 5) suggests that she may have carried out her work as a kind of home industry (Alberts, 1953, p. 28; Quimby, 1966, p. 198). Wristbands in the McCord Museum, Montreal, with Schindler's mark, are illustrated by Graham (1985, p. 15). His mark closely resembles that of Joseph Sasseville (1790–1837), a Quebec silversmith (Fox, 1978, pp. 140–141).

Three disk brooches (figs. 3h, 4b–c) and four wristbands (fig. 18f) are stamped with the Roman letters "PH" separated by a pellet and enclosed in an oblong cartouche (Quimby, 1966, pp. 98–99). This is the punch mark of Pierre Huguet *dit Latour*, a Montreal silversmith and merchant, and his son (1771–1829). The elder Huguet sold large quantities of trade silver to North West Company traders in 1797–1798 (Langdon, 1966, p. 94). Two wristbands with Huguet's mark also have the word "Montreal" in a long, rectangular cartouche.

Another important figure in the silver trade in Montreal was Narcisse Roy. His touchmark, which occurs on a wristband (fig. 18b) and an ear ornament (fig. 19a), consists of the script capital letters "NR" in a trapezoidal cartouche (Quimby, 1966, pp. 98–99). Roy, who was apprenticed to Robert Cruickshank, made and sold silver items to the North West Company, Outfit 1799–1803 (Langdon, 1966, p. 121).

The capital letters "IO" in a square cartouche occur on a heart-shaped brooch (fig. 4v) and a star brooch (fig. 5c). This is the mark of James Orkney, who worked in Quebec (1791–1826) and was partner for a time with Joseph Sasseville (Langdon, 1966, p. 110).

A perforated disk brooch (fig. 3k) was made by Joseph Mailloux (1708–1794), who worked in Quebec (Langdon, 1966, p. 99). His rather elaborate mark consists of the capital letters "JM" in an oval cartouche with a fleur-de-lis ornament above and a star below. Langdon (1966, p. 22) has noted that silversmiths of the French colonial period frequently added the fleur-de-lis and star, which were used by French silversmiths, to their marks.

A Masonic brooch (fig. 5g) bears the script letters "FL" in a clover-shaped cartouche, the mark of Francois Laronneur (1762–1806), who was born and worked in Montreal. On 15 September 1781 Laronneur was engaged by Pierre Huguet *dit Latour* to make articles for the Indian trade for one year (Langdon, 1966, p. 94).

The capital letters "S.C." in a square cartouche,

which occurs on a copper fish-shaped pendant (fig. 1h), is the mark of Simon Curtius of Montreal, who is known to have sold Indian trade ornaments to a trader between 1797 and 1801 (Langdon, 1966, p. 63).

A disk brooch (fig. 3.l) bears the letters "TP" in a cartouche that is roughly rectangular. This mark closely resembles one which Langdon (1966, p. 116; 1969, p. 64) attributes to Thomas Powis, who worked in Quebec City in the 1780s. Fredrickson and Gibb (1980, p. 96) illustrate a disk brooch with a similar mark.

Another Canadian silversmith, Christian Grothe, whose touchmark was the capital letters "CG" separated by a pellet and enclosed in a rectangular cartouche, is represented by a single armband (fig. 12a). Grothe, from Montreal, is known to have worked between 1795 and the early 1860s (Langdon, 1966, p. 78; Quimby, 1966, pp. 98-99).

Two identified British silversmiths are represented in the collection. An armband (fig. 9a) bears the mark of Hester Bateman, the capital script letters "HB" in a rectangular cartouche accompanied by three hallmarks: a lion passant in a rectangular cartouche, a leopard's head with crown, and the script capital letter "Q" in a square cartouche (Quimby, 1958, fig. 2, no. 16; 1966, pp. 98-99). This latter mark is a date letter for the years 1811-1812 (Wyler, 1937, p. 131). Bateman worked in London beginning in the late 18th century (Fredrickson & Gibb, 1980, pp. 98, 106). A crescent-shaped gorget (fig. 8c) marked with the capital letters "LK" in a rectangular cartouche has the same hallmarks as those on the Bateman piece except for the date letter, which is a "U" for the years 1775-1776 (Wyler, 1937, p. 131). Quimby (1958, fig. 2, no. 15, p. 323; 1966, pp. 98-99, 197) has identified this mark as that of Luke Kendall, who worked in London beginning about 1775.

The only American silversmiths represented in the collection may be A. and J. Scrymgeour, whose mark "A & JS" in a rectangular cartouche accompanied by "New York," also in a rectangular cartouche, occurs on a disk brooch from Will County (fig. 3b). A similarly marked brooch, identified as the work of the Scrymgeours, was recovered from a grave at the Ada site, Kent County, Michigan (Herrick, 1958, p. 15, pl. 3, fig. 30).

The remaining pieces of marked trade ornaments in Field Museum's collection have touchmarks that cannot be positively identified with known smiths, although tentative identifications are offered for some pieces. These marks are described below according to type of ornament.

Effigies

A beaver-shaped silver pendant (fig. 1j) is marked with the capital letter "B" in a rectangular, serrated cartouche. This mark, illustrated in Langdon (1966, p. 54; 1969, p. 15), is believed to be that of a Canadian silversmith who worked during the first half of the 18th century.

A hollow turtle-shaped silver pendant (fig. 1e) is marked with the capital letters "TW" in a square cartouche (fig. 21). A cast lead or pewter turtle (fig. 1f) has a large capital "R," the vertical line of which forms the right half of a "V"; in the same cartouche is the Roman numeral "XII" (fig. 22). This numerical designation is generally believed to be associated with Canadian smiths (Quimby, 1966, p. 200), but the touchmark resembles one used by Nicholas Roosevelt of New York City, who worked between 1745 and 1769 (Wyler, 1937, p. 311).

A bird-shaped copper pendant (fig. 1n) is marked with three crowned "A"s, each in a shaped cartouche. Langdon (1966, p. 43; 1969, p. 4) illustrates the same mark on a tumbler cup and, although he does not hazard an identification, he notes that the style of the cup belongs to the first half of the 18th century and that the maker may have been from Quebec. Wyler (1937, p. 325), however, identifies a similar crowned "A" as a Paris date mark for the years 1744-1750.

Brooches

Two disk brooches (figs. 3g, 4x) and a heart-shaped brooch (fig. 4hh) are marked with an uncrowned capital letter "A" in a shaped cartouche (fig. 23).

Two disk brooches (figs. 3c, 4t), both made of German silver, are punch-marked with the capital letters "LH" separated by a pellet and enclosed in a rectangular cartouche (fig. 24). This is possibly the mark of L. Halliday, who worked in Montreal around 1850 (Langdon, 1969, p. 33).

The mark on two disk brooches (fig. 4d, i), a script capital "WC" in a shaped cartouche, is associated by Quimby (1966, pp. 98-99) with an unidentified Canadian silversmith. Also unidentified is the mark on a small conical square brooch (fig. 4dd) and a heart-shaped brooch (fig. 5i) which resembles a script "I" or "B" enclosed in a square cartouche (fig. 25), and the capital letter "C" in a foliated cartouche (fig. 26) on a disk brooch (fig. 4y).

A pair of disk brooches (figs. 3d, 4n) is marked with the capital letters "JO" in a square cartouche. Quimby (1958, p. 324; 1966, pp. 98–99) has identified this mark as that of John Oakes of Montreal, but it does not resemble the mark of this Canadian silversmith illustrated in Langdon (1966, p. 190).

An unidentified mark consisting of the capital letters "RP" followed by a pellet and enclosed in a multipointed cartouche (fig. 27) occurs on a pair of identical heart-shaped brooches (fig. 4aa, cc). Another heart-shaped brooch (fig. 4ff) is marked with the capital letters "JB" in an oval cartouche (fig. 28) and may be the mark of James Butler of Halifax, Nova Scotia, whose known working dates are 1750–1751. Langdon (1966, pp. 54–55) lists Butler but does not illustrate his mark. However, the mark of an unidentified "JB" who worked in either Quebec or New Brunswick in the second quarter of the 19th century is illustrated (Langdon, 1969, p. 16).

A heart-shaped brooch (fig. 5j) and a very small ring brooch (fig. 4w) are marked with the capital letters "JH & NP" in a rectangular cartouche (fig. 29).

Another heart-shaped brooch (fig. 4gg) is marked with the capital letters "IH" separated by a pellet and enclosed in a rectangular cartouche. This mark, which is illustrated by Langdon (1966, p. 86; 1969, p. 39), is attributed to a Quebec silversmith working between 1810 and 1820.

The mark on a turtle-shaped effigy brooch (fig. 5m) is badly worn but may be read as the script capitals "RG" or "RC" separated by a pellet. The exact shape of the cartouche cannot be determined and the mark is unidentified (fig. 30).

Ear Ornament

An ear wheel (fig. 19d) is marked with the capital letters "RR" separated by a pellet and enclosed in a rectangular cartouche (fig. 31). This mark cannot be identified.

Pseudo hallmarks, either alone or accompanying the maker's marks previously described, occur on 13 pieces of trade silver. English silver can be dated precisely because of the custom of hallmarking the work of all silversmiths, a legal device to insure the quality of the work (Quimby, 1966, p. 99). At the end of the 18th century and in the early 19th century, pseudo hallmarks are found on Canadian-made Indian trade silver. Although it is possible that these marks were intended to make such work competitive with English silver, it is

more likely that they were employed to indicate that the quality was equal to the highly competitive hallmarked silver (Langdon, 1966, p. 23).

The most common pseudo hallmark on trade silver in Field Museum's collection is the word "Montreal" in a rectangular cartouche. It occurs in conjunction with the mark of Robert Cruickshank on three armbands, with the mark of Pierre Huguet *dit Latour* on two wristbands, and alone on three wristbands, a disk brooch, and a round gorget. The word "New York" in a rectangular cartouche on a disk brooch occurs in conjunction with the mark of A. and J. Scrymgeour. These marks, of course, denote place of origin.

The lion passant in a rectangular cartouche occurs as a genuine hallmark on an armband and a crescent-shaped gorget, the work, respectively, of British silversmiths Hester Bateman and Luke Kendall (Quimby, 1966, pp. 98–99), and on an armband (fig. 9d) accompanied by the script capital letters "LH" in a square cartouche, the work of an unknown British craftsman (Quimby, 1966, pp. 98–99). The mark, more like a stick figure, occurs alone on a heart-shaped brooch (fig. 4bb), a square brooch (fig. 4z), and a necklace segment (fig. 19i).

As noted previously, the Roman numeral "XII" is generally attributed to Canadian silversmiths. This mark occurs on a headband (fig. 20c) and a wristband. It is also present, however, on a cast lead or pewter turtle effigy (fig. 1f), tentatively identified as the work of an American smith.

Miscellaneous pseudo hallmarks include the Roman numeral "III" with a circular punch above and below (fig. 32) which occurs on an earring (fig. 19b), and two pairs of horizontal, rectangular punches with a vertical rectangular punch between them on a fish-shaped copper pendant (fig. 1h) attributed to the Montreal silversmith Simon Curius.

Intentionally Obliterated Touchmarks

Four silver ornaments in Field Museum's collection have touchmarks that have been partially obliterated intentionally. Three are armbands with the mark of Joseph Schindler and the fourth is a Florentine cross marked by Robert Cruickshank. The armbands are designated in the Department of Anthropology catalog as "Ottawa or Chippewa." The cross is from Round Island. A survey of the literature has failed to turn up other examples

of the deliberate obliteration of the marks on trade ornaments.

During the fur trade era, the Indians of northern Michigan found it necessary at times to make decisions concerning their allegiance, as wars and treaties between France and Great Britain, Great Britain and the American colonies, and Great Britain and the United States caused the occupants of the various forts to change accordingly. For example, the fort at the Straits of Mackinac was held by the French ca. 1715–1761, by the British 1761–1794 and 1812–1815, and by the Americans 1794–1812 and from 1815 (Tanner, 1987, pp. 40–41, 105–107, 115). It is not difficult to imagine that Indian owners of silver ornaments would obliterate the British-era marks of Canadian silversmiths to demonstrate, in a small way, their allegiance to the Americans.

IX. Conclusions

Although many trade ornaments in Field Museum's collection lack specific proveniences, a significant number, perhaps most, were recovered archaeologically from sites in the Great Lakes area. Aside from the interesting variety of forms represented, the presence of numerous pieces of known provenience and with marks that can be identified with known smiths makes the collection valuable for historical purposes. In particular, the marks of identified smiths provide significant information concerning the nature of the fur trade in this region. Not all trade ornaments were marked, presumably because the craftsmen did not consider them significant creations, or possibly because many were the work of apprentices.

A review of the accessions containing marked ornaments provides information concerning the historical significance of the collection. Of the 36 ornaments excavated from graves in Will County, Illinois (accession 2520), seven are marked, two with the initials of Canadian silversmiths and four with the word "Montreal"; the seventh mark is American. Of the 27 trade ornaments in accession 727, 10 are from Cross Village, Michigan, and eight of these have the marks of Canadian silversmiths; of the remainder, which are of unknown provenience, five have Canadian marks. There are 70 ornaments in accession 2328, 61 of which were presumably excavated from a site on Round Island, Michigan; of these, 14 have Canadian marks and one a British mark. Of the remaining nine

ornaments in this accession, five are identified as "Chippewa or Ottawa" and are probably also from Round Island, three have Canadian marks, and two are British. Two ornaments are from Lee County, Mississippi; one of these has a Canadian mark and the other the mark of a British silversmith. All 47 of the ornaments selected from the Mitchell-Van Zelst collection (accessions 3348, 3368) lack proveniences; seven have Canadian marks and one a tentatively identified American mark. Finally, a single ornament which lacks a catalog number bears the mark of a Canadian silversmith.

It is clear that the majority of identified marked ornaments in Field Museum's collection are of Canadian manufacture and date between ca. 1760 and 1820, a period when the fur trade was becoming increasingly important to the Canadian economy. A large number of traders, including such well-known names as McTavish, Fraser, and McGillivray, were closely associated with the Montreal-based North West Company and its struggles with the Hudson's Bay Company for control of the trade. Smaller independent fur trade companies were also based in Montreal. It is significant that a large proportion of the trade ornaments from the Great Lakes region in published reports are of Canadian manufacture (Brown, 1918; Overton, 1931; Quimby, 1937, 1938; Alberts, 1953; Herrick, 1958; VanStone, 1970; Mason, 1983).

As Langdon (1966, pp. 17–20) has noted, Montreal-based traders tended to patronize local smiths to a greater degree than did those of the Hudson's Bay Company, who generally ordered their trade goods and supplies from England. Field Museum's collection indicates the skill of Canadian smiths, as well as the variety of forms available to the traders.

Langdon (1966, pp. 19–20) suggests that it was the aggressive bartering activities of the independent traders, together with the considerable output of the Montreal silversmiths, that was responsible for directing a substantial share of the fur trade to that city in the late 18th century. Canadian traders were particularly active in the Great Lakes region and were at least partly responsible for the continued British influence there, which persisted until after the war of 1812. During that war, the Chippewa, Ottawa, and Potawatomi were all British allies. Quimby (1937, pp. 18, 20) believed that this explained the large proportion of Canadian trade ornaments that have been found in the Great Lakes area.

Although there is only a single definitely identifiable American-made trade ornament in Field Museum's collection (the "New York" marked perforated disk brooch, fig. 3b), the importance of this item should be emphasized: It is a rare piece of evidence of United States-based traders in the Midwest, and is most probably related to John Jacob Astor's American Fur Company. Astor founded his firm in 1808 and pressed Congress to pass laws, aimed at Montreal-based traders, barring foreigners from importing goods into the United States and trading there. In 1816 such legislation was passed and by the following year Astor's company had complete control of the Great Lakes fur trade south of the Canadian border with Fort Mackinac as its headquarters (Lavender, 1964, pp. 109-110, 233). The company funneled American and foreign trade goods into the Midwest, and the New York-made trade brooch found in Will County, Illinois, was most likely included in a shipment of such goods.

Acknowledgments

The photographs in this study are the work of Mr. Ron Testa and Mrs. Diane Alexander White, Field Museum of Natural History. Figures 2, 6-7, 10-11, 13-14, and 16-17 were drawn by Mrs. Linnea M. Lahlum. Mr. Gary Litherland and Mr. Timothy Kent examined the collection of trade ornaments and provided the author with valuable assistance. For a careful and critical reading of an early draft of this study, the author is grateful to Mr. Kent and to Dr. Charles E. Cleland, the Michigan State University Museum. Conservation work on some of the ornaments was undertaken by Ms. Catherine Sease and Mrs. Loran H. Recchia. Several drafts of the manuscript were typed by Mrs. Recchia.

Funding for this publication was provided in part by an anonymous fund of the Department of Anthropology.

Literature Cited

- ALBERTS, R. C. 1953. Trade silver and Indian silver work in the Great Lakes region. *The Wisconsin Archaeologist*, n.s., 34(1): 1-123.
- BARBEAU, M. 1942. Indian-trade silver. *The Beaver, Outfit* 273: 10-14.
- BEAUCHAMP, W. M. 1903. Metallic Ornaments of the New York Indians. *New York State Museum, Bulletin* 73. Albany, New York.
- BLACKBIRD, A. J. 1977. History of the Ottawa or Chippewa Indians, 2nd ed. Little Traverse Regional Historical Society, Petoskey, Michigan (reprint of 1887 ed.).
- BROWN, C. E. 1918. Indian trade implements and ornaments. *The Wisconsin Archaeologist*, 17(3): 61-97.
- CLELAND, C. E. 1972. From sacred to profane: Style drift in the decoration of Jesuit finger rings. *American Antiquity*, 37(2): 202-210.
- CONVERSE, H. M. 1900. Iroquois silver brooches, pp. r231-254. *In New York State Museum*, 54th annual report, vol. 1. Albany, New York.
- DEMETER, C. S. 1980. Nickel silver: An aspect of material culture change in the Upper Great Lakes Indian trade. *Historical Archaeology*, 14: 108-119.
- FEEST, J. E., AND C. F. FEEST. 1978. Ottawa, pp. 772-786. *In Trigger, B. G., ed., Handbook of North American Indians*. Vol. 15, Northeast. Smithsonian Institution, Washington, D.C.
- FOX, R. A. C. 1978. Quebec and Related Silver at the Detroit Institute of Arts. Wayne State University Press, Detroit, Michigan.
- FREDRICKSON, N. J., AND S. GIBB. 1980. The Covenant Chain: Indian Ceremonial and Trade Silver. National Museums of Canada, Ottawa, 168 pp.
- GIBSON, A. M. 1971. The Chickasaws. The University of Oklahoma Press, Norman, Oklahoma.
- GRAHAM, C. E. W. 1985. Indian trade silver in the McCord Museum collection. *Canadian Collector*, May/June: pp. 15-19.
- HANSON, C., JR. 1979. German silver. *The Museum of the Fur Trade Quarterly*, 15(2): 9-11.
- . 1983. Trade earrings—An overview. *The Museum of the Fur Trade Quarterly*, 19(1): 2-8.
- HARRINGTON, M. R. 1908. Iroquois silverwork. *Anthropological Papers of the American Museum of Natural History*, 1: 351-369.
- HERRICK, R. 1958. A report on the Ada site, Kent County, Michigan. *Michigan Archaeologist*, 4(1): 1-27.
- LANGDON, J. E. 1966. Canadian silversmiths 1700-1900. Stinehour Press, Toronto.
- . 1969. Guide to Marks on Early Canadian Silver—18th and 19th Centuries. The Ryerson Press, Toronto.
- LAVENDER, D. 1964. The Fist in the Wilderness. Doubleday & Company, Inc., New York.
- MAINFORT, R. C., JR. 1979. Indian social dynamics in the period of European contact. *Michigan State University Publications of the Museum, Anthropological Series*, 1(4).
- MASON, C. I. 1983. The Grignon House collection of late historic trade materials from Kaukauna, Wisconsin. *The Wisconsin Archaeologist*, n.s., 64(3-4): 239-260.
- OVERTON, G. 1931. Silver ornaments from Grand Butte. *The Wisconsin Archaeologist*, n.s., 10(3): 91-98.
- PARKER, A. C. 1910. The origin of Iroquois silversmithing. *American Anthropologist*, 12(3): 349-357.

- QUIMBY, G. I. 1937. Notes on Indian trade silver ornaments in Michigan. *Papers of the Michigan Academy of Sciences, Arts and Letters*, 22: 15-24.
- . 1938. Dated Indian burials in Michigan. *Papers of the Michigan Academy of Science, Arts, and Letters*, 23: 63-72.
- . 1958. Silver ornaments and the Indians. *Miscellanea Paul Rivet, Octogenario Dicata (XXXI) Congreso Internacinal de Americanistas*, 1: 318-337.
- . 1966. *Indian Culture and European Trade Goods*. University of Wisconsin Press, Madison, 217 pp.
- TANNER, H. H., ED. 1987. *Atlas of Great Lakes Indian History*. University of Oklahoma Press, Norman, 224 pp.
- TRAQUAIR, R. 1938. Montreal and the Indian trade silver. *Canadian Historical Review*, March, pp. 1-8.
- VANSTONE, J. W. 1970. Canadian trade silver from Indian graves in northern Illinois. *The Wisconsin Archaeologist*, n.s., 51(1): 21-30.
- WOOD, A. S. 1974. A catalogue of "Jesuit" and ornamental rings from western New York: Collections of Charles F. Wray and the Rochester Museum and Science Center. *Historical Archaeology*, 8: 83-104.
- WYLER, S. B. 1937. *The Book of Old Silver*. Crown Publishers, New York.

Appendix

American Indian Trade Ornaments (Accessions 97, 727, 947, 996, 1618, 2328, 2520, 3348, 3368)

Following is a list of the Indian trade ornaments in Field Museum's collection described in this study.

Cat. No.	Description	Provenience	Maker
PENDANTS			
47846	Latin cross	Round Island, Mich.	Cruickshank
47847	Florentine cross (fig. 1a)	Round Island	Cruickshank
207710	Florentine cross (fig. 1b)	Will County, Ill.	Cruickshank
47845	Maltese cross (fig. 1c)	Round Island	...
268479	beaver effigy (fig. 1g)	unknown	...
268475	beaver effigy	unknown	...
47855	beaver effigy (fig. 1d)	Round Island	...
47856	beaver effigy (fig. 1i)	Round Island	Schindler
300485	beaver effigy (fig. 1j)	unknown	...
300419	beaver effigy (fig. 1k)	unknown	...
300420	turtle effigy (fig. 1e)	unknown	...
300474	turtle effigy (fig. 1f)	unknown	Roosevelt(?)
300391	fish effigy (fig. 1h)	unknown	Curtius
300490	bird effigy (fig. 1n)	unknown	...
47853	breast ornament (fig. 1m)	Round Island	...
47860, 1-5	breast ornament pieces(?)	Round Island	...
207708	diamond-shaped pendant (fig. 1,l)	Will County	...
BROOCHES			
68293	disk brooch (fig. 3f)	unknown	...
68294	disk brooch	unknown	...
68304	disk brooch (fig. 3d)	unknown	...
207714	disk brooch (fig. 3e)	Will County	Scrymgeour
207719	disk brooch (fig. 3b)	Will County	...
268454	disk brooch (fig. 3c)	unknown	...
300503	disk brooch	unknown	...
300504	disk brooch (fig. 3a)	unknown	...
300505	disk brooch	unknown	...
68295	disk brooch (fig. 4c)	unknown	Huguet
68297	disk brooch (fig. 3m)	unknown	...
68298	disk brooch (fig. 4b)	unknown	Huguet
68299	disk brooch (fig. 3h)	unknown	Huguet
68300	disk brooch	unknown	...
68301	disk brooch (fig. 4a)	unknown	...
68302	disk brooch	unknown	...
68303	disk brooch	unknown	...
207721	disk brooch (fig. 3j)	Will County	...
268441	disk brooch (fig. 3i)	unknown	...
268447	disk brooch (fig. 3k)	unknown	Mailloux
300425	disk brooch (fig. 3l)	unknown	Powis
300428	disk brooch (fig. 3g)	unknown	...
47848	disk brooch (fig. 4e)	Round Island	Cruickshank
47849	disk brooch (fig. 4g)	Round Island	Cruickshank
47851	disk brooch (fig. 4d)	Round Island	...
47852 (2)	disk brooches (fig. 4h-i)	Round Island	...
47854	disk brooch (fig. 4o)	Round Island	...
47862, 1-7	disk brooches (fig. 4p)	Round Island	...
300439	disk brooch (fig. 4x)	unknown	...
268455	disk brooch (fig. 4t)	unknown	...
300423	disk brooch (fig. 4y)	unknown	...
300443	disk brooch (fig. 5,l)	unknown	...
68305	disk brooch (fig. 4f)	unknown	Cruickshank/ Arnoldi(?)

Cat. No.	Description	Provenience	Maker
BROOCHES			
68306	disk brooch (fig. 4k)	unknown	Cruickshank
68307	disk brooch (fig. 4n)	unknown	...
207720	disk brooch (fig. 4m)	Will County	...
68309	ring brooch (fig. 4l)	unknown	...
207718, 1-4	ring brooches (fig. 4j)	Will County	...
300472	ring brooch (fig. 4w)	unknown	...
300434	ring brooch (fig. 4s)	unknown	...
47864, 1-3	ring brooches (fig. 4r)	Round Island	...
47865, 1-3	ring brooches (fig. 4q)	Round Island	...
300446	square brooch (fig. 4z)	unknown	...
300427	square brooch (fig. 4ee)	unknown	...
300436	square brooch (fig. 4dd)	unknown	...
47866	heart brooch (fig. 4u)	Round Island	...
268444	heart brooch (fig. 4v)	unknown	Orkney
268466	heart brooch (fig. 4bb)	unknown	...
300429	heart brooch (fig. 4gg)	unknown	...
300430	heart brooch (fig. 4aa)	unknown	...
300431	heart brooch (fig. 4cc)	unknown	...
268469	heart brooch (fig. 4ff)	unknown	...
300435	heart brooch (fig. 4hh)	unknown	...
268461	heart brooch (fig. 5j)	unknown	...
268453	heart brooch (fig. 5i)	unknown	...
268462	heart brooch (fig. 5k)	unknown	Cruickshank/ Arnoldi(?)
207716	star brooch (fig. 5h)	Will County	Schindler
68310	star brooch (fig. 5f)	unknown	...
268445	star brooch (fig. 5c)	unknown	Orkney
300426	animal effigy brooch (fig. 5m)	unknown	...
268467	Masonic brooch (fig. 5g)	unknown	Larsonneur
GORGETS			
47831	round gorget (figs. 5b, 6)	Lee County, Miss.	Cruickshank
47832	round gorget (fig. 5a)	Round Island	...
47833	round gorget (fig. 5e)	Round Island	Cruickshank
207717	round gorget (figs. 5d, 7)	Will County	...
155858, 1-6	crescent-shaped gorgets (fig. 8e)	Potawatomi of Wisconsin	...
19392 (2)	crescent-shaped gorget (fig. 9f)	Seminole	...
19393	crescent-shaped gorget	Seminole	...
207711	crescent-shaped gorget (fig. 9e)	Will County	...
207712	crescent-shaped gorget (figs. 8b, 10)	Will County	...
207713	crescent-shaped gorget (figs. 8a, 11)	Will County	...
47839	crescent-shaped gorget (fig. 8c)	Lee County	Kendall
300491	crescent-shaped gorget (fig. 8d)	unknown	...
ARM- AND WRISTBANDS			
47836, 1-2	armbands (figs. 12c-d, 13-14)	Chippewa or Ottawa	Schindler
47835, 1-2	armbands (figs. 9a-b)	Chippewa or Ottawa	Bateman
92051, 1-2	armbands (figs. 15a)	Sac and Fox, Iowa	...
47837	armband (fig. 9c)	Round Island	...
47838	armband (fig. 9d)	Round Island	...
68279	armband (figs. 12a, 16)	Cross Village, Mich.	Grothe
47834	armband (figs. 15b, 17)	Chippewa or Ottawa	Schindler
no #	armband (fig. 12b)	unknown	Cruickshank
300461	armband (fig. 15c)	unknown	...
19391, 1-2	wristbands (fig. 18a)	Seminole	...
47840	wristband	Round Island	Schindler

Cat. No.	Description	Provenience	Maker
ARM- AND WRISTBANDS			
47841	wristband	Round Island	Schindler
47842	wristband (fig. 18e)	Round Island	Schindler
47843	wristband	Round Island	Schindler
52329, 1-2	wristbands	Prairie du Chien, Wis.	...
68283	wristband (fig. 18h)	Cross Village	Cruickshank
68284	wristband (fig. 18d)	Cross Village	Huguet
68285	wristband (fig. 18b)	Cross Village	Roy
68286	wristband (fig. 18c)	Cross Village	Cruickshank
68288	wristband	Cross Village	Huguet
68289	wristband (fig. 18f)	Cross Village	Huguet
68290	wristband	Cross Village	Huguet
68291	wristband (fig. 18g)	Cross Village	...
207722, 1-4	wristbands (fig. 18i)	Will County	...
EAR ORNAMENTS			
207703	earrings (3) (fig. 19n)	Will County	...
300497	earring (fig. 19b)	unknown	...
47868	earrings (2) (fig. 19e)	Round Island	...
47869	earrings (2) (fig. 19o)	Round Island	...
47863	earrings (2) (fig. 19r)	Ottawa or Chippewa	...
47870	earbobs (4) (fig. 19,l-m,q)	Round Island	...
47872	earbobs (2)	Round Island	...
47873	earbobs (2)	Round Island	...
47875	earbobs (2) (fig. 19s-t)	Round Island	...
207725	carbobs (6)	Will County	...
207726	earbobs (6)	Will County	...
47850	ear wheel (fig. 19a)	Round Island	Roy
207709	ear wheel (fig. 19c)	Will County	...
300421	ear wheel (fig. 19d)	unknown	...
68313	earrings (2) (fig. 19f)	unknown	...
MISCELLANEOUS			
268464	finger ring (fig. 19g)	unknown	...
300498	finger ring (fig. 19h)	unknown	...
68292	head/hatband (fig. 20b)	Cross Village	...
300470	head/hatband (fig. 20c)	unknown	...
19390	waistband (fig. 20a)	Seminole	...
300481	nose ornament (fig. 19k)	unknown	...
47853	hair pipe(?) (fig. 19p)	Round Island	...
47867	beads (5)	Round Island	...
300440	necklace section(?) (fig. 19i)	unknown	...
47861	unidentified (fig. 19j)	Round Island	...

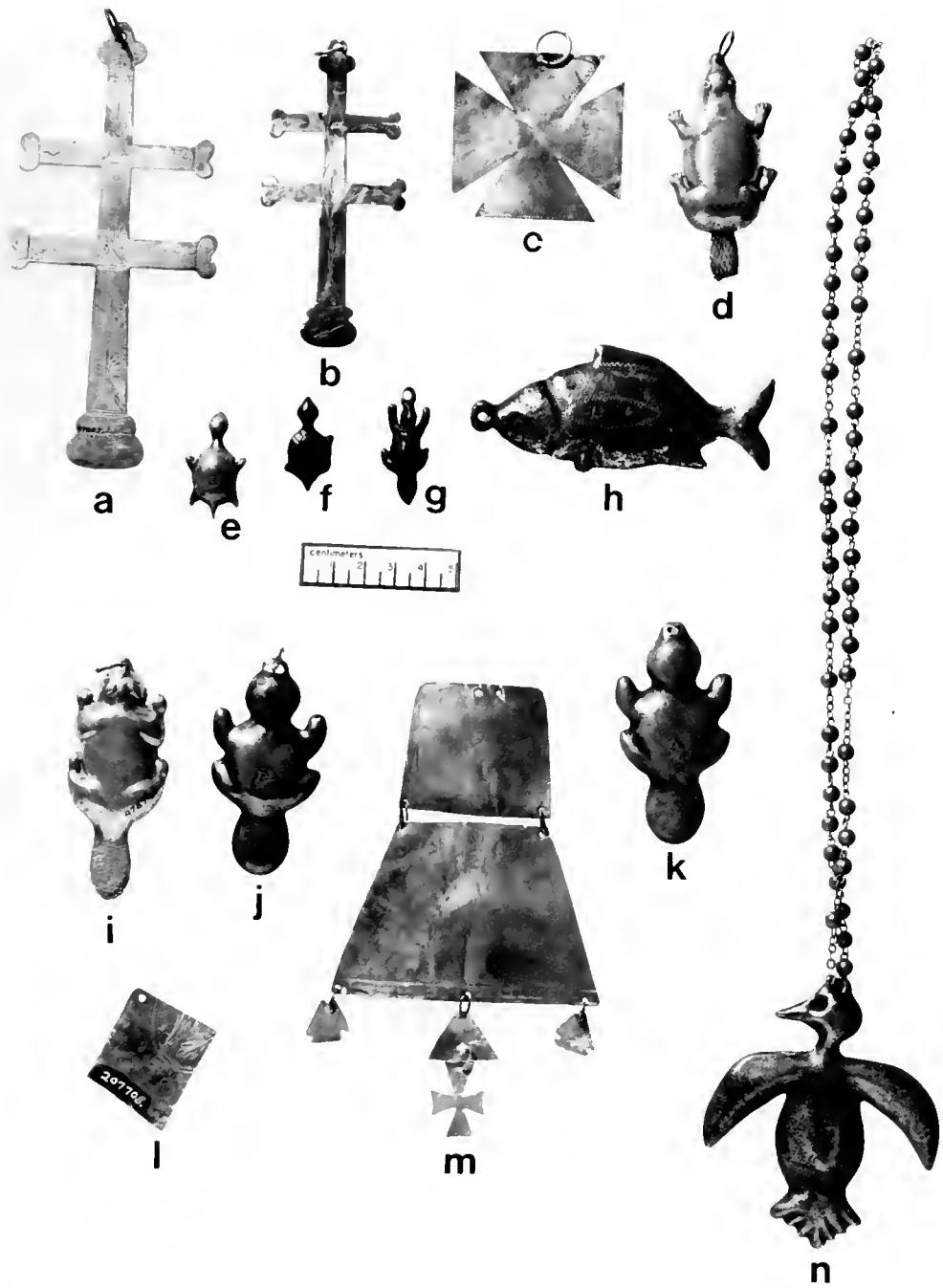


FIG. 1. **a**, Florentine cross (47847); **b**, Florentine cross (207710); **c**, Maltese cross (47845); **d**, beaver effigy (47855); **e**, turtle effigy (300420); **f**, turtle effigy (300474); **g**, beaver effigy (268479); **h**, fish effigy (300391); **i**, beaver effigy (47856); **j**, beaver effigy (300485); **k**, beaver effigy (300419); **l**, diamond-shaped pendant (207708); **m**, breast ornament (47853); **n**, bird effigy (300490). (Neg. no. 111322.)



1 cm

FIG. 2. Engraved design on a breast ornament (47853).

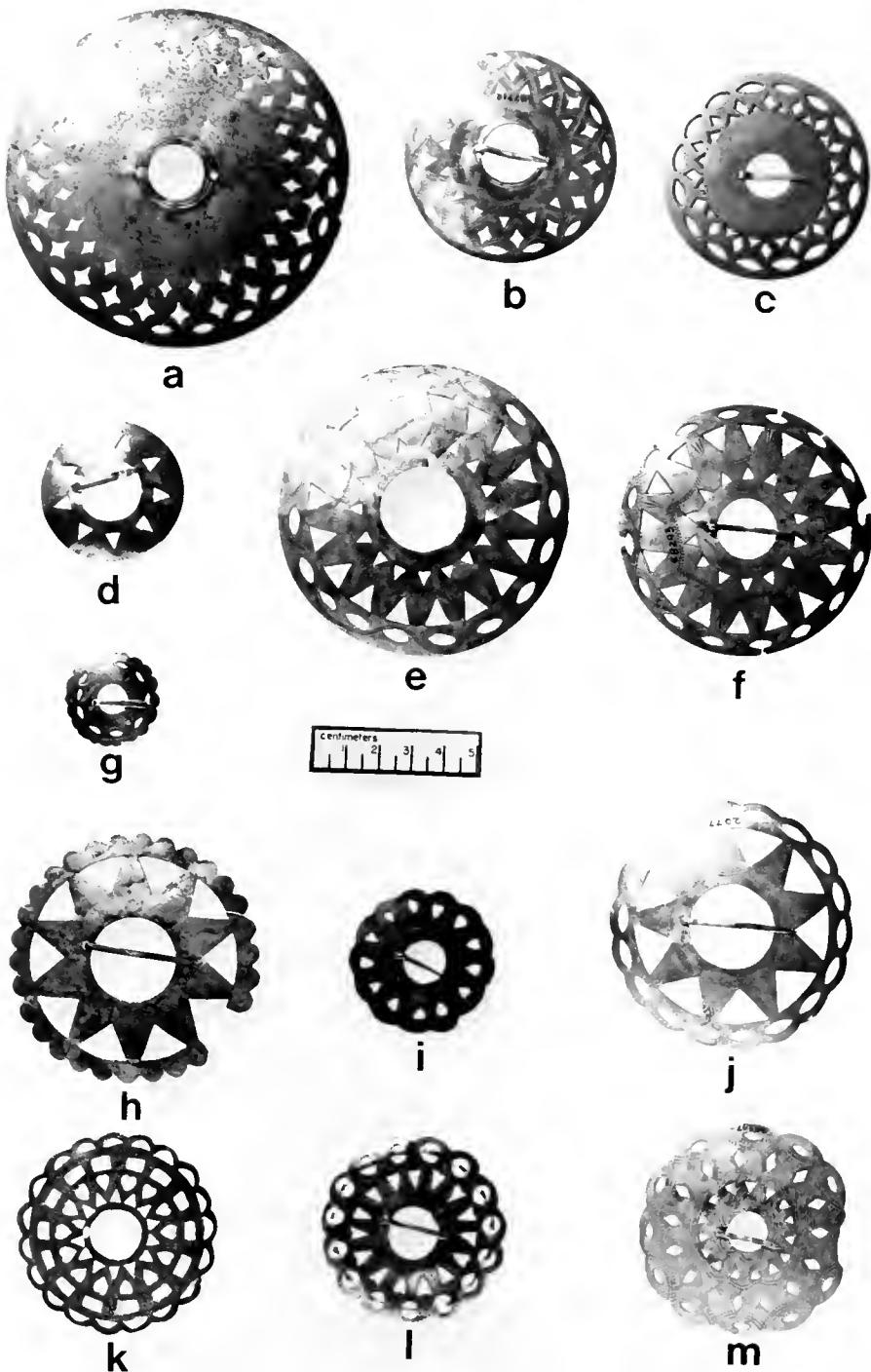


FIG. 3. **a**, disk brooch (300504); **b**, disk brooch (207719); **c**, disk brooch (268454); **d**, disk brooch (68304); **e**, disk brooch (207714); **f**, disk brooch (68293); **g**, disk brooch (300428); **h**, disk brooch (68299); **i**, disk brooch (268441); **j**, disk brooch (207721); **k**, disk brooch (268447); **l**, disk brooch (300425); **m**, disk brooch (68297). (Neg. no. 111317.)

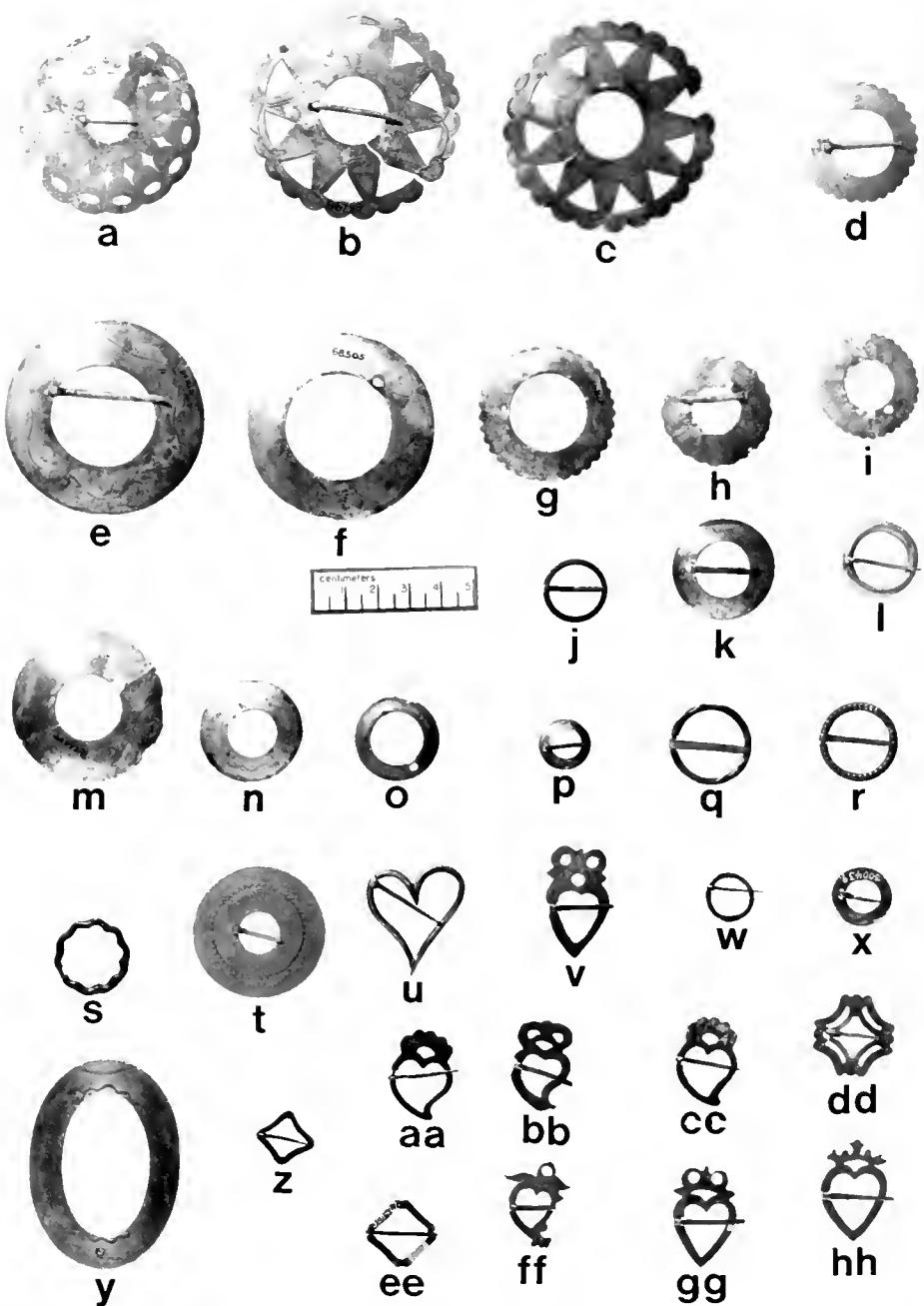


FIG. 4. a, disk brooch (68301); b, disk brooch (68298); c, disk brooch (68295); d, disk brooch (47851); e, disk brooch (47848); f, disk brooch (68305); g, disk brooch (47849); h, disk brooch (47852); i, disk brooch (47852); j, ring brooch (207718); k, disk brooch (68306); l, ring brooch (68309); m, disk brooch (207720); n, disk brooch (68307); o, disk brooch (47854); p, disk brooch (47862); q, ring brooch (47865); r, ring brooch (47864); s, ring brooch (300434); t, disk brooch (268455); u, heart brooch (47866); v, heart brooch (268444); w, ring brooch (300472); x, disk brooch (300439); y, disk brooch (300423); z, square brooch (300446); aa, heart brooch (300430); bb, heart brooch (268466); cc, heart brooch (300431); dd, square brooch (300436); ee, square brooch (300427); ff, heart brooch (268469); gg, heart brooch (300429); hh, heart brooch (300435). (Neg. no. 111319.)

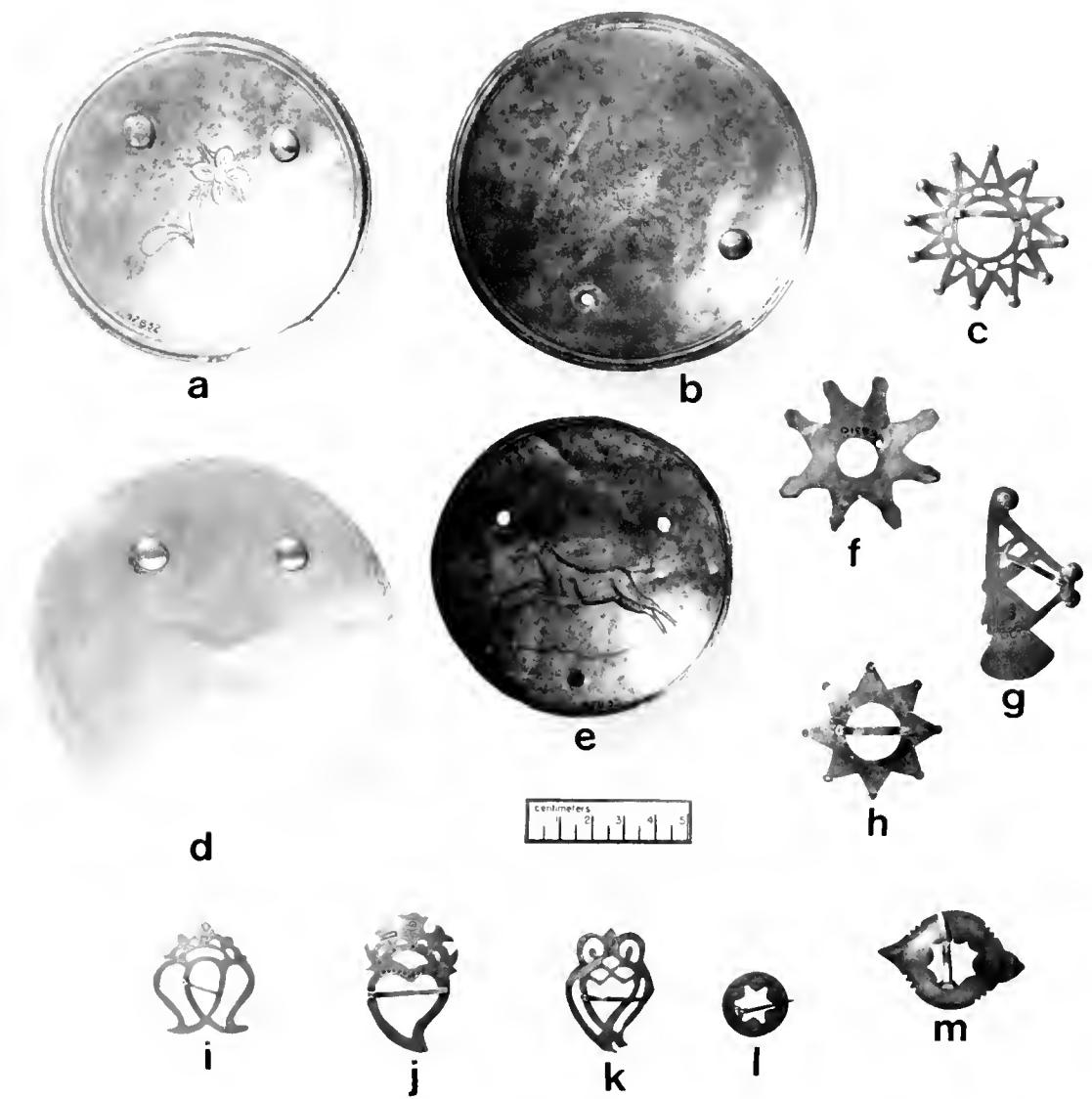


FIG. 5. a, round gorget (47832); b, round gorget (47831); e, star brooch (268445); d, round gorget (207717); e, round gorget (47833); f, star brooch (68310); g, Masonic brooch (268467); h, star brooch (207716); i, heart brooch (268453); j, heart brooch (268461); k, heart brooch (268462); l, disk brooch (300443); m, animal effigy brooch (300426). (Neg. no. 111321.)

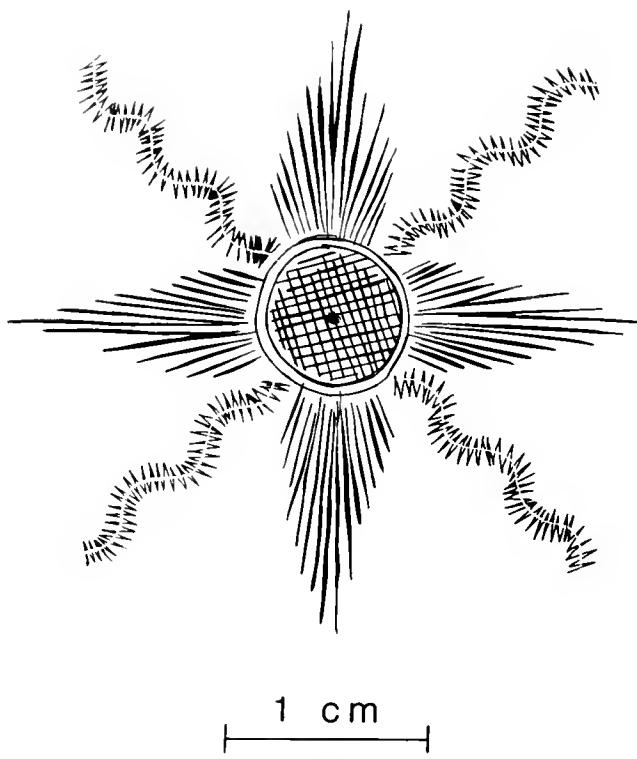


FIG. 6. Engraved design on a round gorget (47831).

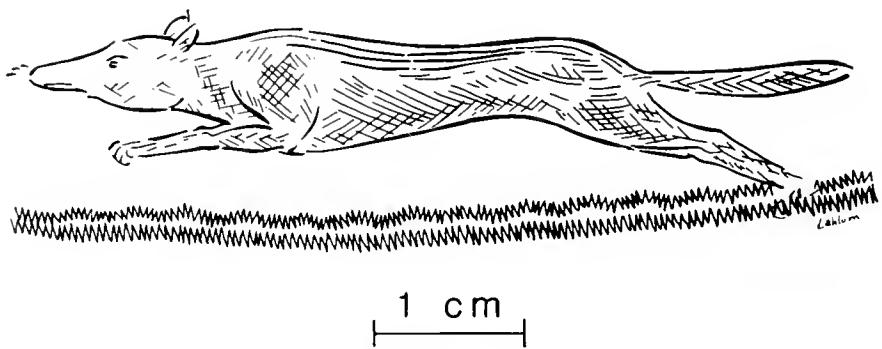


FIG. 7. Engraved design on a round gorget (207717).

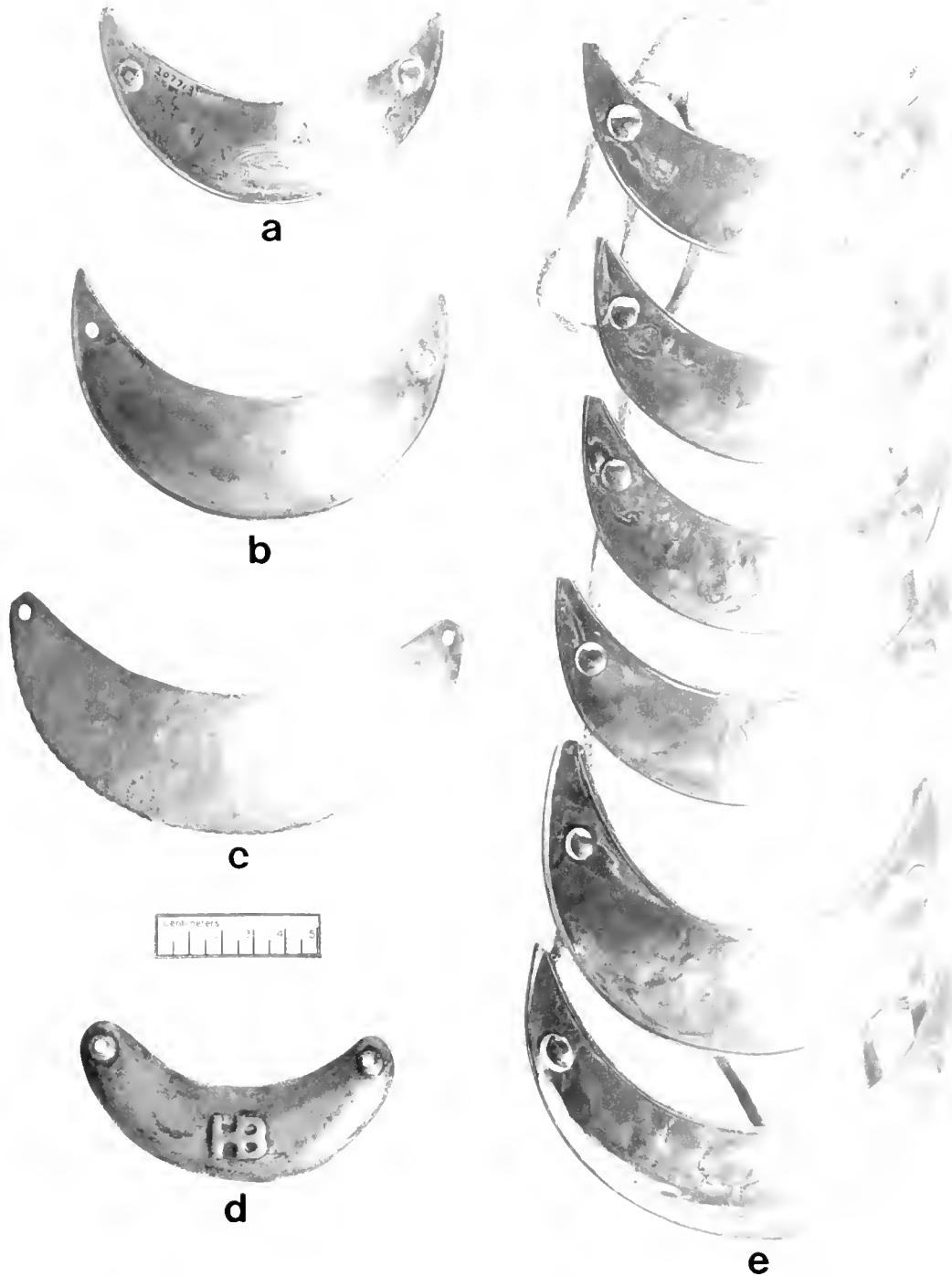


FIG. 8. a, crescent-shaped gorget (207713); b, crescent-shaped gorget (207712); c, crescent-shaped gorget (47839); d, crescent-shaped gorget (300491); e, crescent-shaped gorgets (155858, 1-6). (Neg. no. 111323.)

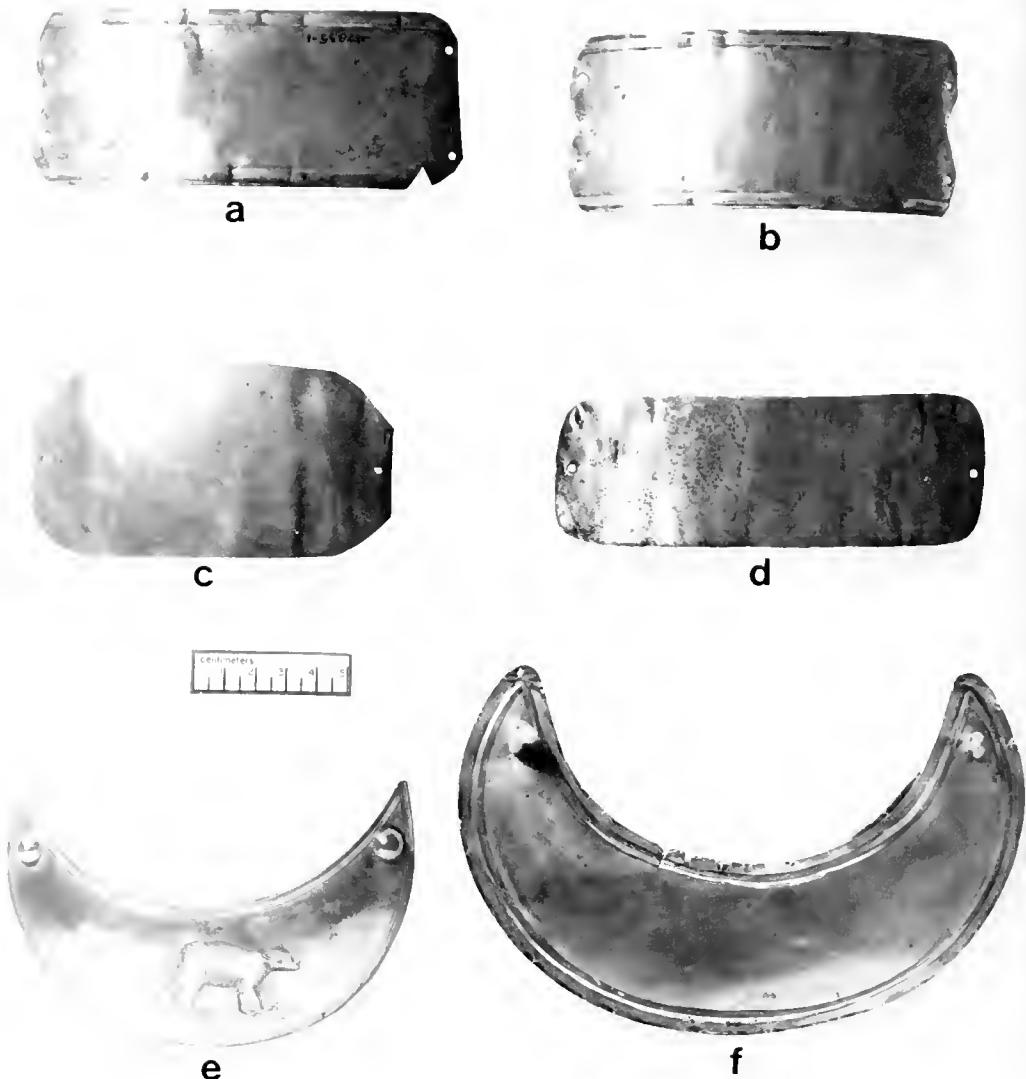


FIG. 9. a, armband (47835, 1); b, armband (47835, 2); c, armband (47837); d, armband (47838); e, crescent-shaped gorget (207711); f, crescent-shaped gorget (19392). (Neg. no. 111318.)

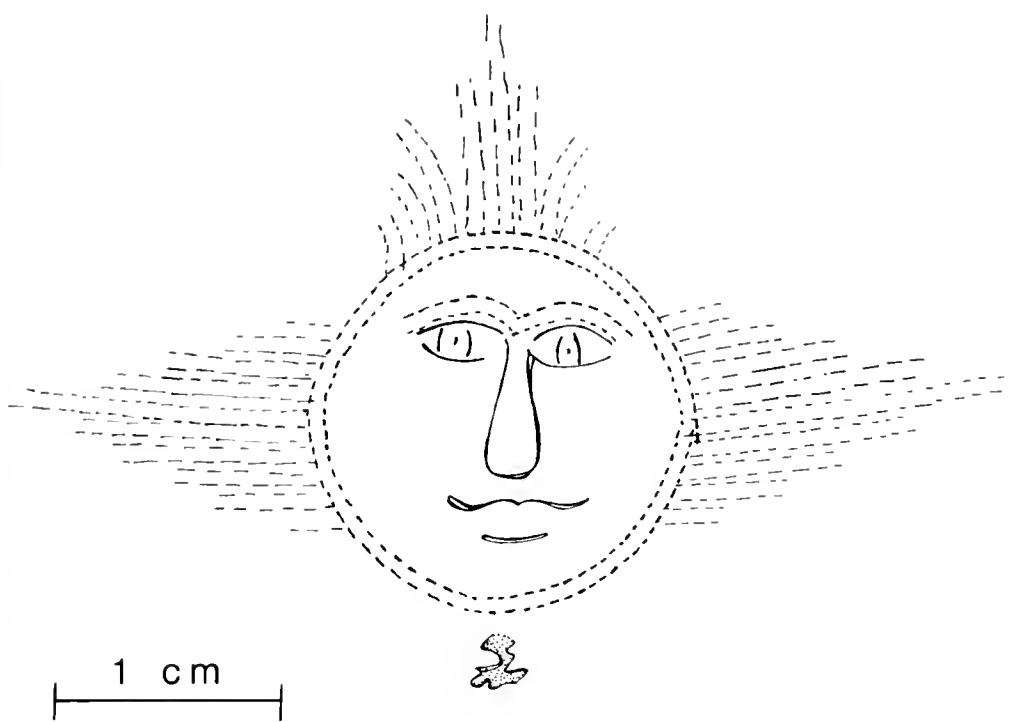


FIG. 10. Engraved design on a crescent-shaped gorget (207712).

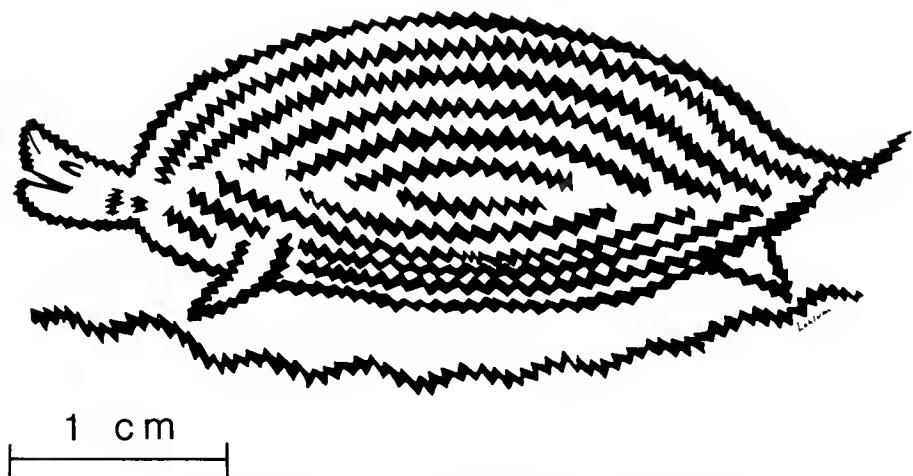


FIG. 11. Engraved design on a crescent-shaped gorget (207713).

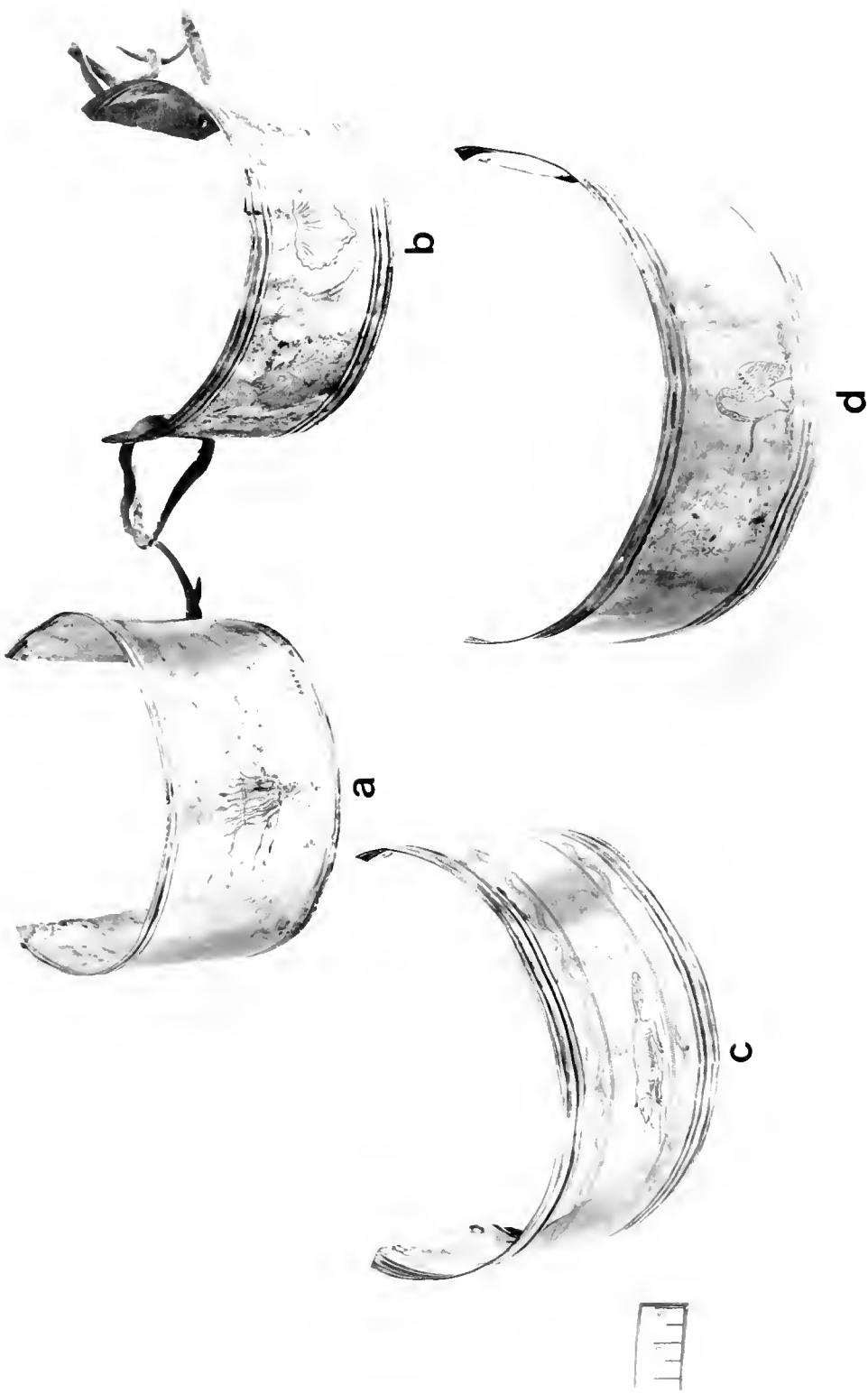


FIG. 12. a, armband (68279); b, armband (no #); c, armband (47836, 1); d, armband (47836, 2). (Neg. no. 111314.)

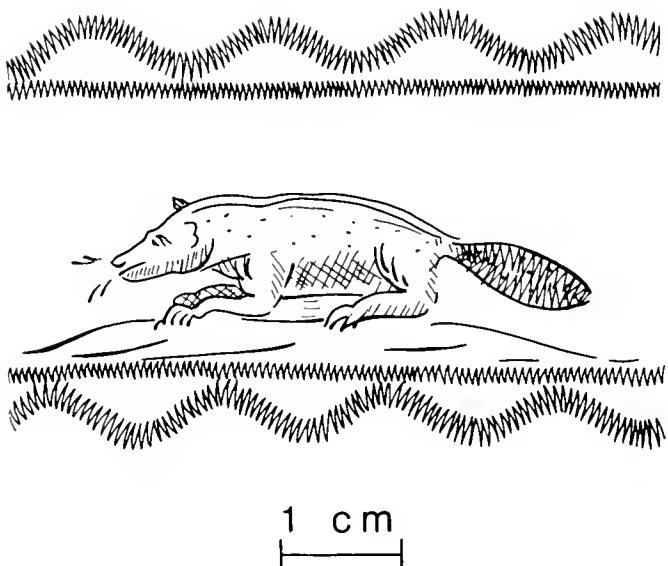


FIG. 13. Engraved design on an armband (47836, 1).

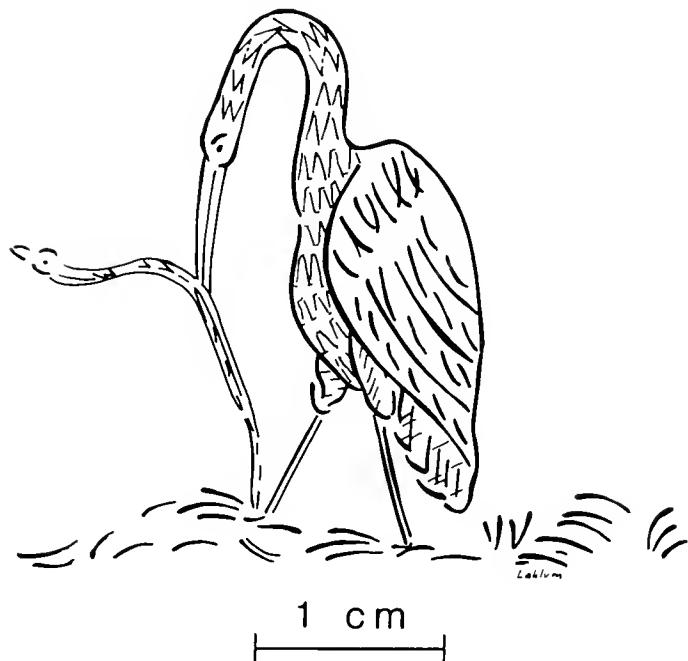


FIG. 14. Engraved design on an armband (47836, 2).

FIG. 15. a, armband (92051, 1); b, armband (47849); c, armband (300461). (Neg. no. 111313.)



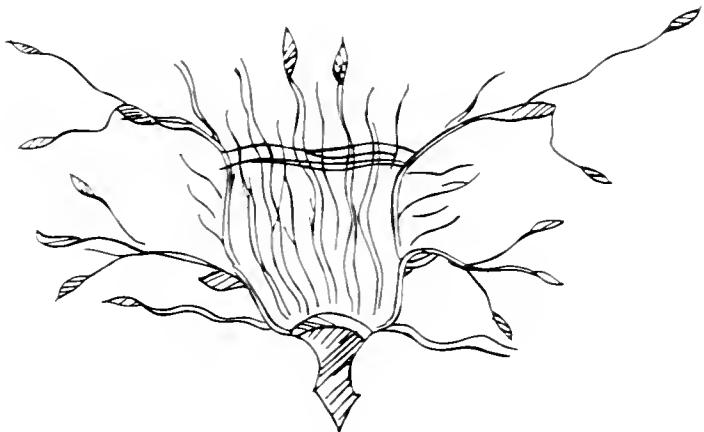
a



b

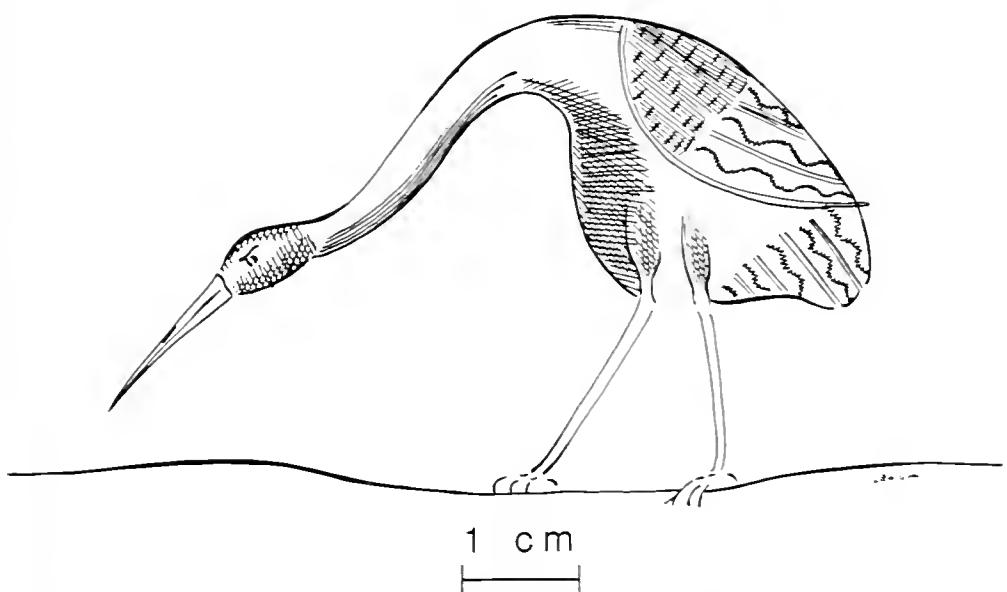


c



1 cm
[Scale bar]

FIG. 16. Engraved design on an armband (68279).



1 cm
[Scale bar]

FIG. 17. Engraved design on an armband (47834).

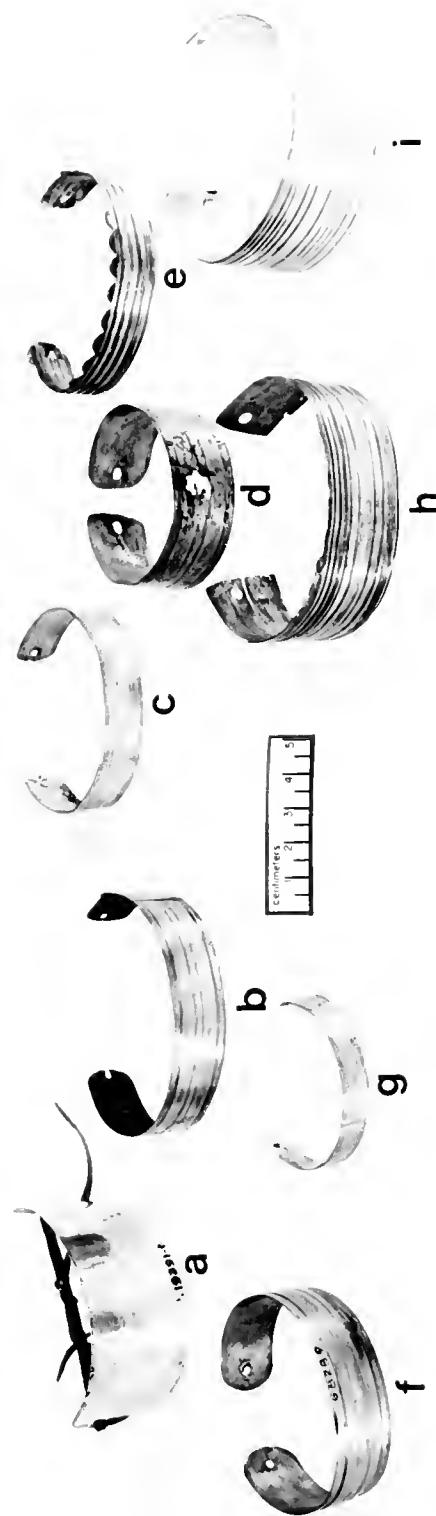


FIG. 18. a, wristband (19391, 1); b, wristband (68283); c, wristband (68286); d, wristband (68284); e, wristband (47842); f, wristband (68289); g, wristband (68291); h, wristband (68283); i, wristband (207722, 3). (Neg. no. 111315.)

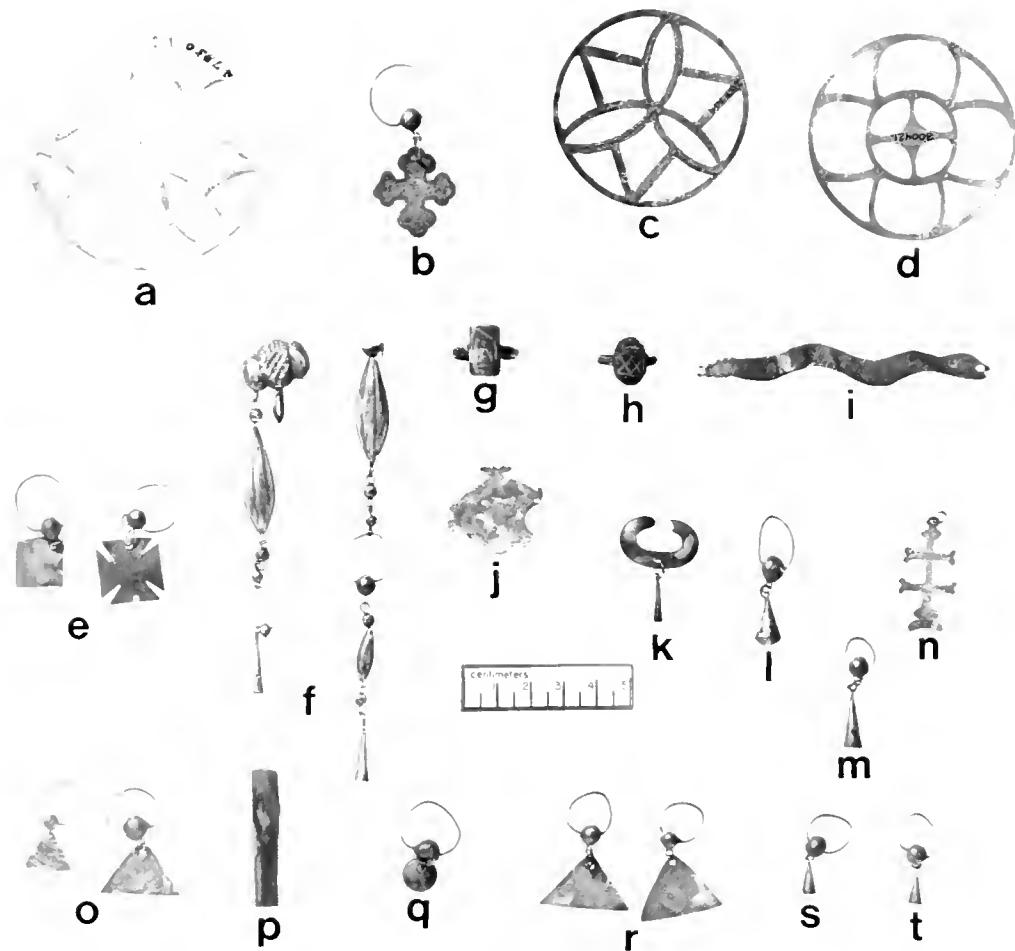


FIG. 19. a, ear wheel (47850); b, earring (300497); c, ear wheel (207709); d, ear wheel (300421); e, earrings (47868); f, earrings (68313); g, finger ring (268464); h, finger ring (300498); i, necklace section (300440); j, unidentified (47861); k, nose ornament (300481); l, earbob (47870); m, earbob (47870); n, earrings (207703); o, earrings (47869); p, hair pipe(?) (47853); q, earbob (47870); r, earrings (47863); s, earbob (47875); t, earbob (47875). (Neg. no. 111320.)

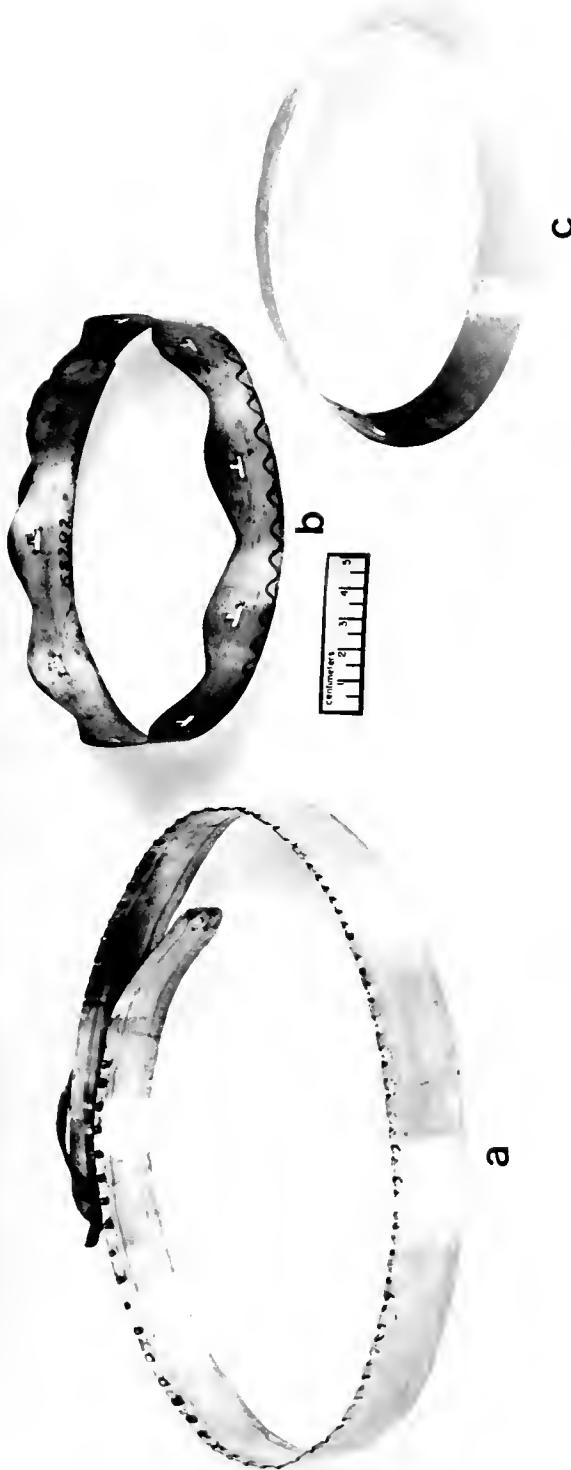


FIG. 20. a, waistband (19390); b, head/hatband (68292); c, head/hatband (300470). (Neg. no. 111316.)



FIG. 21. Unidentified touchmark on a turtle-shaped pendant (300420). (Neg. no. 107957-6.)



FIG. 22. Unidentified touchmark on a turtle-shaped pendant (300474). (Neg. no. 107957-7.)

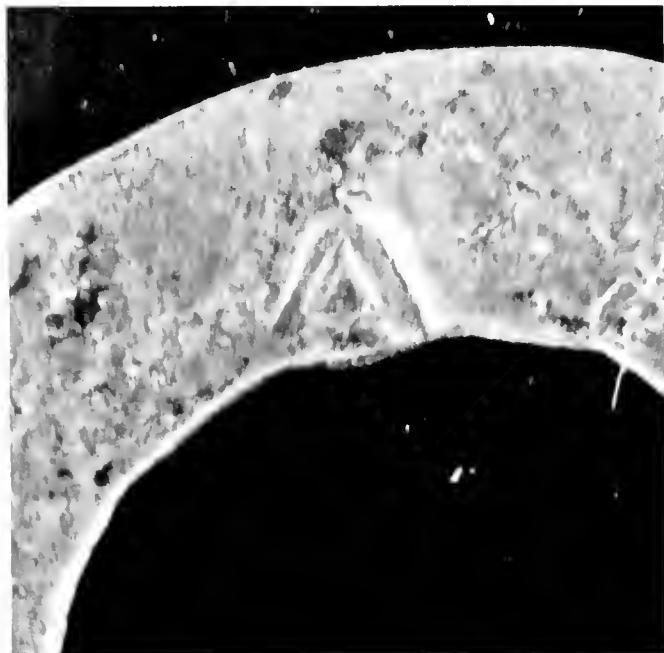


FIG. 23. Unidentified touchmark on two disk brooches (68293, 300439). (Neg. no. 107954-6.)

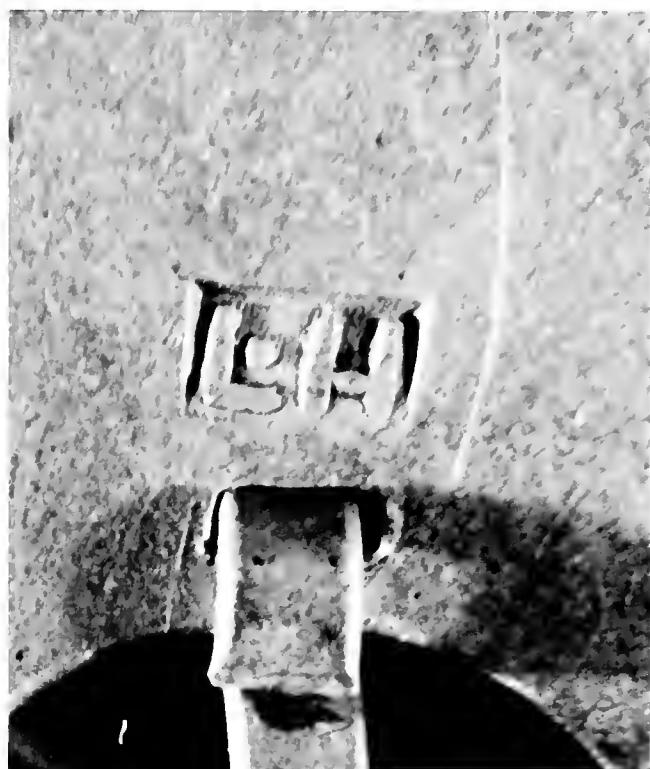


FIG. 24. Unidentified touchmark on two disk brooches (268454-268455). (Neg. no. 107955-4.)



FIG. 25. Unidentified touchmark on a conical square brooch (300436) and a heart-shaped brooch (268453). (Neg. no. 107957-8.)

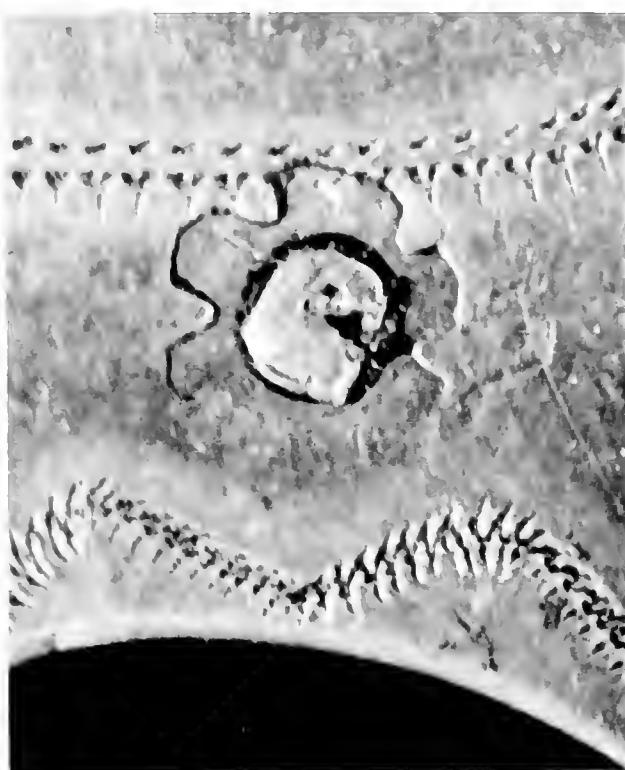


FIG. 26. Unidentified touchmark on a disk brooch (300423). (Neg. no. 107954-7.)



FIG. 27. Unidentified touchmark on two heart-shaped brooches (300430-300431). (Neg. no. 107955-3.)



FIG. 28. Unidentified touchmark on a heart-shaped brooch (268469). (Neg. no. 111324-2.)



FIG. 29. Unidentified touchmark on a heart-shaped brooch (268461) and a ring brooch (300472). (Neg. no. 107955-5.)



FIG. 30. Unidentified touchmark on a turtle-shaped effigy brooch (300426). (Neg. no. 111324-7.)



FIG. 31. Unidentified touchmark on an ear wheel (300421). (Neg. no. 111324-8.)

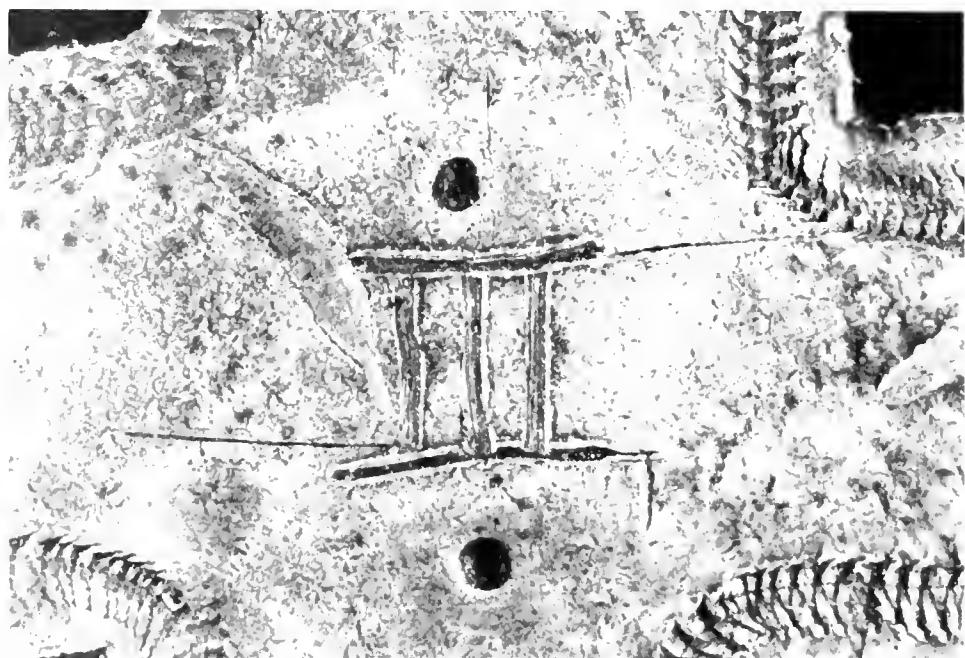
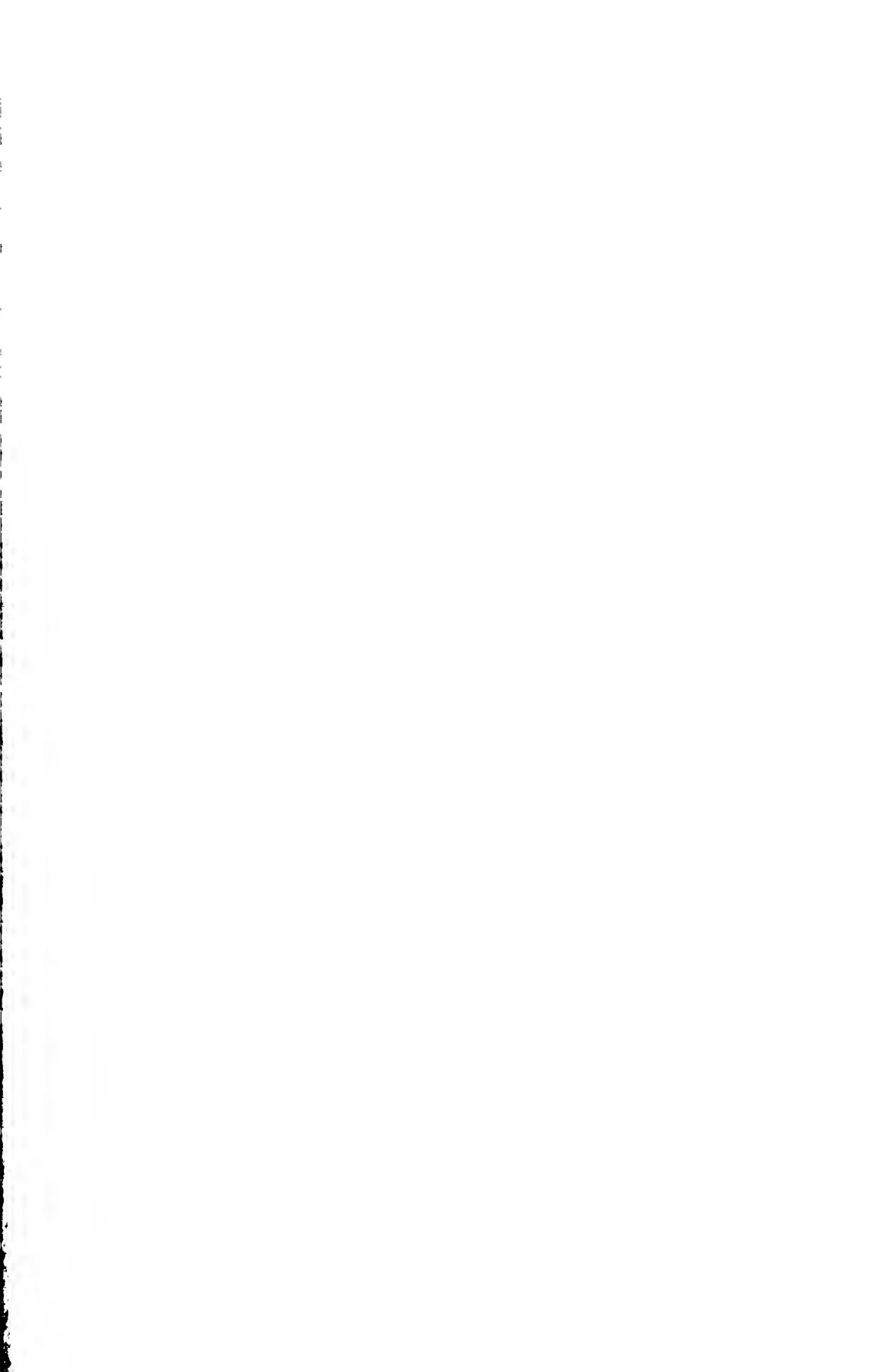


FIG. 32. Pseudo hallmark on an earring (300497). (Neg. no. 111324-22.)





Field Museum of Natural History
Roosevelt Road at Lake Shore Drive
Chicago, Illinois 60605-2496
Telephone: (312) 922-9410





UNIVERSITY OF ILLINOIS-URBANA



3 0112 046461023